# SHARP SERVICE MANUAL

No. 00ZUBD80DESME

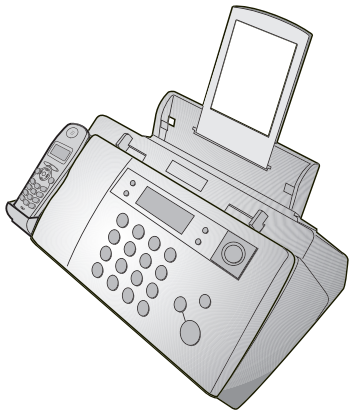


Illustration:UX-BD80DE

# FACSIMILE

# UX-BD80

## MODEL UX-BD90

| MODEL | SELECTION CODE | DESTINATION |
|---|---|---|
| UX-BD80/90 | DE | Germany |
| UX-BD80/90 | H | U.K. |
| UX-BD80 | IT | Italy |

| Cordless Handset x 1pc. | Cordless Handset x 2pcs. |
|---|---|
| UX-BD80 | UX-BD90 |

## CONTENTS


**CHAPTER 1. GENERAL DESCRIPTION**
[1] Specifications ..... 1-1
[2] Operation panel (Fax machine)..... 1-2
[3] Operation panel (Cordless handset) ..... 1-3
[4] Transmittable documents ..... 1-4
[5] Installation ..... 1-5
[6] Quick reference guide ..... 1-12

**CHAPTER 2. ADJUSTMENTS**
[1] Adjustments ..... 2-1
[2] Diagnostics and service soft switch ..... 2-2
[3] Troubleshooting ..... 2-26
[4] Error code table..... 2-27

**CHAPTER 3. MECHANISM BLOCKS**
[1] General description ..... 3-1
[2] Ink jet printer ..... 3-3
[3] Disassembly and assembly procedures..... 3-6

**CHAPTER 4. DIADRAMS**
[1] Block diagram ..... 4-1
[2] Wiring diagram ..... 4-2
[3] Point-to-point diagram ..... 4-3

**CHAPTER 5. CIRCUIT DESCRIPTION**
[1] Circuit description .....5-1
[2] Circuit description of control PWB .....5-2
[3] Circuit description of LIU PWB .....5-16
[4] Circuit description of power supply PWB.....5-19
[5] Circuit description of CIS unit .....5-19

**CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT**
[1] Control PWB circuit .....6-1
[2] LIU PWB circuit .....6-11
[3] Power Supply PWB circuit.....6-16
[4] Operation Panel PWB circuit .....6-18
[5] Ink PWB circuit .....6-21

**CHAPTER 7. OPERATION FLOWCHART**
[1] Protocol .....7-1
[2] Power on sequence.....7-2

**CHAPTER 8. OTHER**
[1] Service tools .....8-1
[2] Rewriting version up the FLASH ROM .....8-4

**Parts Guide**


Parts marked with " ⚠ " are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

## CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !
Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's instructions.

(Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

(French) ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type recommandé par le constructeur.
Mettre au rébut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING
Explosionsfare vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

## PRECAUTIONS FOR USING LEAD-FREE SOLDER

**1. Employing lead-free solder**

The **Control PWB, LIU PWB, Power PWB and Operation Panel PWB** of this model employs lead-free solder.
This is indicated by the "LF" symbol printed on the PWB and in the service manual.
The suffix letter indicates the alloy type of the solder.
Example:

Indicates lead-free solder of tin, silver and copper.

**2. Using lead-free solder**

When repairing a PWB with the "LF" symbol, only lead-free solder should be used. (Using normal tin/lead alloy solder may result in cold soldered joints and damage to printed patterns.)
As the melting point of lead-free solder is approximately 40°C higher than tin/lead alloy solder, it is recommended that a dedicated bit is used, and that the iron temperature is adjusted accordingly.

**3. Soldering**

As the melting point of lead-free solder (Sn-Ag-Cu) is higher and has poorer melting point (flow), to prevent damage to the land of the PWB, extreme care should be taken not to leave the bit in contact with the PWB for an extended period of time. Remove the bit as soon as a good flow is achieved.
The high content of tin in lead free solder will cause premature corrosion of the bit.
To reduce wear on the bit, reduce the temperature or turn off the iron when it is not required.
Leaving different types of solder on the bit will cause contamination of the different alloys, which will alter their characteristics, making good soldering more difficult.
It will be necessary to clean and replace bits more often when using lead-free solder. To reduce bit wear, care should be taken to clean the bit thoroughly after each use.

# CHAPTER 1. GENERAL DESCRIPTION

## [1] Specifications

**This Sharp fax supports SMS messaging.**

### 1. Fax machine and general specifications

| | |
|---|---|
| **Print cartridge yield*:** (at 4% coverage**) | Initial cartridge<br>Quality mode OFF: Approx. 300 A4 pages<br>Quality mode ON: Approx. 200 A4 pages<br>Replacement cartridge: SHARP **UX-C70B**<br>Quality mode OFF: Approx. 600 A4 pages<br>Quality mode ON: Approx. 400 A4 pages |
| **Paper tray capacity:** (UX-BD80DE/90DE/80IT) | Approx. 100 A4-size sheets (at room temperature; maximum stack height should not be higher than the line on the tray) |
| **Paper tray capacity:** (UX-BD80H/90H) | Approx. 50 A4-size sheets (at room temperature; maximum stack height should not be higher than the line on the tray) |
| **Recording system:** | Thermal inkjet |
| **Print resolution:** | 600 x 600 dpi |
| **Effective printing width:** | 203 mm max. |
| **Memory size*:** | 448 KB (approx. 24 average pages with ECM turned off; 20 minutes of voice messages (including OGMs)) |
| **Automatic dialing:** | 30 numbers |
| **Modem speed:** | 14,400 bps with auto fallback to lower speeds |
| **Transmission time*:** | Approx. 6 seconds (only when ECM is on) |
| **Compatibility:** | ITU-T (CCITT) G3 mode |
| **Compression scheme:** | MR, MH, MMR |
| **Telephone function:** | Yes (cannot be used if power fails) |
| **Applicable telephone line:** | Public switched telephone network (TBR21) / PBX |
| **Reception modes:** | TEL/FAX, TEL, FAX, A.M. |
| **Automatic document feeder:** | 10 sheets max. (A4, 80 g/cm$^2$ paper) |
| **Input document size:** | **Automatic feeding:**<br>Width: 148 to 216 mm<br>Length: 140 to 297 mm<br>**Manual feeding:**<br>Width: 148 to 216 mm<br>Length: 140 to 600 mm |
| **Effective scanning width:** | 210 mm max. |
| **Scanning resolution:** | **Horizontal:** 8 dots/mm<br>**Vertical:**<br>Standard: 3.85 lines/mm<br>Fine/Halftone: 7.7 lines/mm<br>Super fine: 15.4 lines/mm |
| **Halftone (grayscale):** | 64 levels |
| **Contrast control:** | Automatic/Dark selectable |
| **Copy function:** | Single / Multi (99 copies/page) |
| **Display:** | 16-digit LCD display, 2 lines |
| **Power requirements:** (UX-BD80DE/90DE/80IT) | 220-230 V AC, 50 Hz |
| **Power requirements:** (UX-BD80H/90H) | 230 V AC, 50Hz |
| **Power consumption:** | Stand-by (with cordless handset charging in cradle): 6.0 W<br>Maximum: 35 W |
| **Noise emission:** (UX-BD80DE/90DE/80IT only) | Less than 70 dBA (measured according to EN27779 (DIN 45635)) |
| **Operating temperature:** | 15 - 32°C |
| **Humidity:** | 25 - 80 % RH |
| **Dimensions (without attachments):** | Width: 354 mm<br>Depth: 247 mm<br>Height: 138 mm |
| **Weight (without attachments):** | Approx. 3.2 kg |

### 2. Cordless handset specifications

| | |
|---|---|
| **Standard:** | DECT (Digital Enhanced Cordless Telecommunications) |
| **Frequency:** | 1.88 to 1.9 GHz |
| **Duplex operation:** | TDMA (Time Division Multiple Access) |
| **Dimensions:** | Width: 51 mm<br>Depth: 29 mm<br>Height: 145 mm |
| **Weight:** | Approx. 130 g (with battery) |
| **Battery:** | 1.2 V Ni-MH battery; capacity: 850 mAh x 3 pcs (min. 600 mAh) |
| **Power consumption:** | Approx. 1.0 W (in stand-by mode) |
| **Initial charging:** | Approx. 12 hours for initial charge |
| **Battery life:** | Approx. 10 hours (600 minutes) (at room temperature) |
| **Battery life in stand-by mode** | Approx. 120 hours with one full charge (at room temperature)<br>Battery life (both normal and in stand-by mode), may vary depending on usage, range from base machine, and environmental conditions such as temperature. |

*Quality mode is initially turned off. To turn on Quality mode.
**Based on Sharp Standard Chart at standard resolution, excluding time for protocol signals (i.e., ITU-T phase C time only).

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specifications figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

## [2] Operation panel (Fax machine)

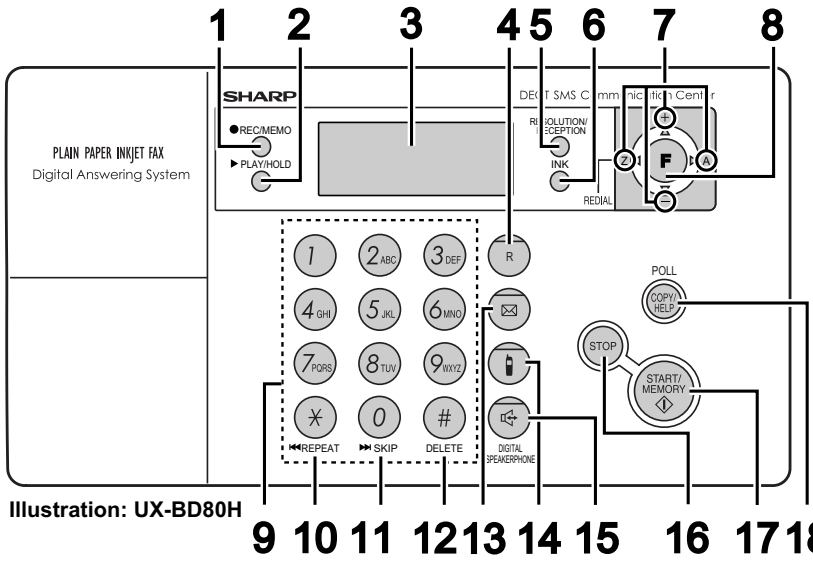
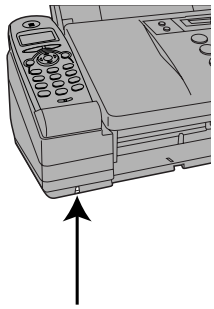



Illustration: UX-BD80H

**Microphone location**



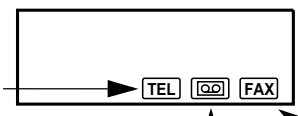
The microphone is located here. Speake gacing this location when using the speakerphone.

1. **REC/MEMO key**
   Press this key to record an outgoing message, or memo.
2. **PLAY/HOLD key**
   Press this key to play recorded messages. During a phone call on the speakerphone, press this key to place the call on hold.
3. **Display**
   This displays messages and prompts to help you operate the machine.
4. **R key**
   If you are on a Flash-type PBX, use this key to dial out (first press the **R** key and then dial the number).
5. **RESOLUTION/RECEPTION key**
   When a document is in the feeder, press this key to adjust the resolution for faxing or copying. At any other time, press this key to select the reception mode (the selected reception mode will appear in the display)
6. **INK key**
   Press this key before installing or replacing the print cartridge to move the print cartridge holder to the cartridge replacement position.
7. **Arrow keys**
   Use these keys to scroll through and select settings, and to search for auto-dial numbers.
8. **FUNCTION key**
   Press this key to followed by the arrow keys select special functions and settings.
9. **Number key**
   Use these keys to dial numbers, and enter numbers and letters when storing auto-dial numbers.
10. **REPEAT key**
    Press this key while listening to a message to play it again.
11. **SKIP key**
    Press this key while listening a message to skip to the next message.
12. **DELETE key**
    Press this key to erase recorded messages.
13. **SMS key**
    Press this key to send an SMS message, check received SMS messages, and access SMS setting.
14. **Intercom key**
    Press this key to page or locate the cordless handset.
15. **DIGITAL SPEAKERPHONE key**
    Press this key to make a phone call using the speakerphone (speak facing the operation panel at a distance of about 50 cm to 1m). This key can also be used to listen to the line and fax tones through the speaker when faxing a document. This key also functions as a delete key when composing an SMS message.
16. **STOP key**
    Press this key to cancel operations before they are completed.
17. **START/MEMORY key**
    Press this key after dialing to begin fax transmission. Press this key before dialing to send a fax through memory. The key can also be pressed in the date and time display to show the percentage of memory currently used.
18. **COPY/HELP/POLL key**
    When a document is in the feeder, press this key to make a copy of a document. At any other time, press this key to print out the Help List, a quick reference guide to the operation of your fax machine. This key can also be used after dialing another fax machine to receive a document (previously loaded in the other machine's feeder) without assistance from the operator of the other machine (polling).

### Icons in the display

The envelope icon appears while an SMS message is being received.

This appears when the reception mode is set to TEL.



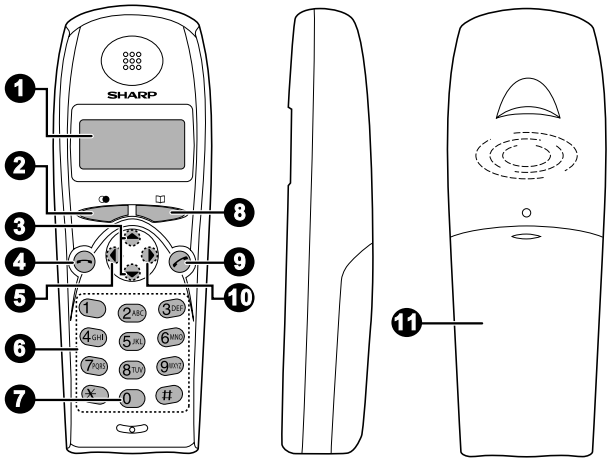

This appears when the reception mode is set to A.M. (the answering system is turned on).

The exclamation point icon appears when the inbox is full. When checking the messages in your outbox, this appears if the message being viewed was not sent successfully.

Note: Both the TEL and FAX icons appear when the reception mode is set to TEL/FAX.

This appears when the reception mode is set to FAX.

## [3] Operation panel (Cordless handset)




**1. Display**
This displays messages and prompts to help you use the cordless handset.

**2. key**
Press the key and then or key to scroll through the most recent calls made and received on the cordless handset (received calls will only appear if you have Caller ID). If you have Caller ID, you can hold down the key to access the Caller ID list in the fax machine. During a phone conversation, this key can be pressed to issue a flash signal. If you are on a flash-type PBX, this key can be used to dial out.

**3. key and key**
**Receiver volume:** When talking on the cordless handset, press these keys to adjust the receiver volume.
**Scroll through option settings:** When not talking on the cordless handset, press these keys to scroll through the option settings. To select a setting, press .

**4. key**
Press this key to end a call. To turn off the power of the cordless handset, hold down this key until the display goes blank.

**5. key**
Use this key to clear an entry, or to move back to the previous level in the settings. Press this key during a call to put the other party on hold.

**6. Number keys**
Use these keys to dial numbers, and enter numbers and letters when storing auto-dial numbers.

**7. key**
When entering an auto-dial number, hold this key down until a hyphen appears to insert a pause between digits.

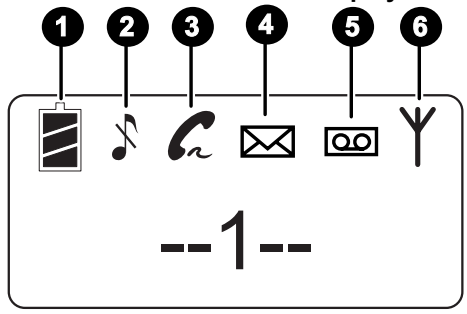
**8. key**
Use this key to search for an auto dial number (press key and then press key and key to scroll through your auto-dial numbers). If you hear a fax tone when you answer a call, press this key to begin fax reception.

**9. (TALK) key**
Press this key to make or answer a call. To turn on the power of the cordless handset when it is off, hold down this key until the display turns on.

**10. key**
Press this to select settings and complete entries when programming information in the cordless handset.

**11. Battery cover**
Remove this cover to install or replace the handset battery.

### Icon in the cordless handset display




1. This indicates how much power is left in the batteries.
2. This indicates that the cordless handset ringer (and the beeps that sound when keys are pressed) are turned off (silent ring).
3. This appears when has been pressed on the cordless handset, and blinks when a call comes in.
4. This appears when new SMS messages have been received in the machine (this changes to when all SMS messages have been read). Note that the cordless handset cannot be used to read SMS messages.
5. This appears when new messages have been received in the fax machine's answering system. The envelope flap opens when there are only old messages.
6. This appears when the cordless handset and the fax machine are able to communicate.

### Characters that appear in the cordless handset display

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| K | L | M | N | O | P | Q | R | S | T |
| U | V | W | X | Y | Z | * | - | pause | # |
| ? | _ | | | | | | | | |

Note that lower case letters in the fax machine display will appear as upper case letters in the cordless handset display, and a letter with an umlaut will appear as a space.
In addition, the following characters appear differently in the fax machine and cordless handset displays:

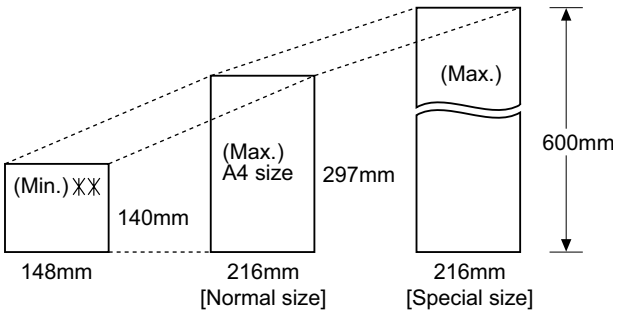
| Fax machine | . | / | ! | " | # | $ | % | & | ' |
|---|---|---|---|---|---|---|---|---|---|
| Cordless handset | | / | | | □ | | | | |
| Fax machine | ( | ) | * | + | , | - | : | ; | < |
| Cordless handset | ( | ) | * | | | -- | | | < |
| Fax machine | = | > | ? | @ | [ | ¥ | ] | ^ | _ |
| Cordless handset | -- | > | ? | | ( | | ) | | _ |
| Fax machine | ` | { | \| | } | → | ← | € | £ | |
| Cordless handset | | | | | | | | | |

:space

# [4] Transmittable documents

## 1. Document Sizes

| | | |
|---|---|---|
| Normal size | Width | 148 - 216 mm |
| | Length | 140 - 297 mm |




※※ Use document carrier sheet for smaller documents.

- With special sizes, only one sheet can be fed into the machine at a time. Insert next page into feeder as current page is being scanned.

## 2. Paper Thickness & Weight

| | 10 sheets | 1sheet(Manual) |
|---|---|---|
| Paper weight | 21.5 lbs. (80 g/m$^2$) | 14 lbs. ~ 42 lbs. (52 g/m$^2$ ~ 157g/m$^2$) |
| Paper thickness (ref.) | 0.1 mm | 0.1 mm ~ 0.18mm |
| Paper size | LGL (216 mm x 355.6 mm)<br>A4 (210 mm x 297 mm)<br>LTR (216 mm x 279 mm) | |
| Feeder capacity | A4/LTR: 10 sheets max.<br>LGL : 1 sheets max. | |

## 3. Document Types

- Normal paper

  Documents handwritten in pencil (No. 2 lead or softer), fountain pen, ball-point pen, or felt-tipped pen can be transmitted.

  Documents of normal contrast duplicated by a copying machine can also be transmitted.

- Diazo copy (blue print)
- Diazo copy documents of a normal contrast may be transmitted.
- Carbon copy

  A carbon copy may be transmitted if its contrast is normal.

## 4. Cautions on Transmitting Documents

- Documents written in yellow, greenish yellow, or light blue ink cannot be transmitted.
- Ink, glue, and correcting fluid on documents must be dry before the documents can be transmitted.
- All clips, staples and pins must be removed from documents before transmission.
- Patched (taped) documents should be copied first on a copier and then the copies used for transmission.
- All documents should be fanned before insertion into the feeder to prevent possible double feeds.

## 5. Automatic Document Feeder Capacity

Number of pages that can be placed into the feeder at anytime is as follows:

Normal size: max. ADF 10 pages

Special size: single sheet only (manual feed)

NOTE: • When you need to send or copy more pages than the feeder limit, place additional pages in feeder when last page in feeder is being scanned.

• Place additional pages carefully and gently in feeder. If force is used, double-feeding or a document jam may result.

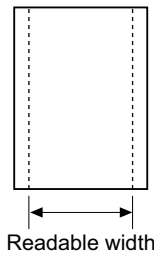
## 6. Readable Width & Length

The readable width and length of a document are slightly smaller than the actual document size.

Note that characters or graphics outside the effective document scanning range will not be read.

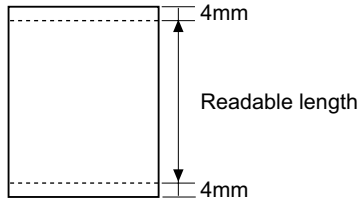
- **Readable width**

  210mm, max




- **Readable length**

  This is the length of the document sent minus 4mm from the top and bottom edges.



# [5] Installation

## 1. Site selection

Take the following points into consideration when selecting a site for this model.

ENVIRONMENT

- The machine must be installed on a level surface.
- Keep the machine away from air conditioners, heaters, direct sunlight, and dust.
- Provide easy access to the front, back, and sides of the machine. In particular, keep the area in front of the machine clear, or the original document may jam as it comes out after scanning.
- The temperature should be between °15 - 32°C.
- The humidity should be between 25% and 80% (without condensation).

ELECTRICITY

AC 220-230V, 50Hz, earthed AC (2-prong) outlet.
**(UX-BD80DE/90DE/80IT))**

AC 230V, 50Hz, earthed AC (3-prong) outlet.
**(UX-BD80H/90H)**

Caution!

- Connection to a power source other than that specified will cause damage to the equipment and is not covered under the warranty.
- If your area experiences a high incidence of lightning or power surges, we recommend that you install a surge protector for the power and telephone lines. Surge protectors can be purchased at most telephone specialty stores.

If the machine is moved from a cold to a warm place...

Condensation may form on the reading glass if machine is moved from a cold to a warm place, this will prevent proper scanning of documents for transmission. Turn on the power and wait approximately 2 hours before using machine.

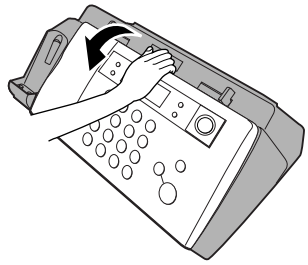
TELEPHONE JACK

A standard telephone jack must be located near the machine. This is the telephone jack commonly used in most homes and offices.

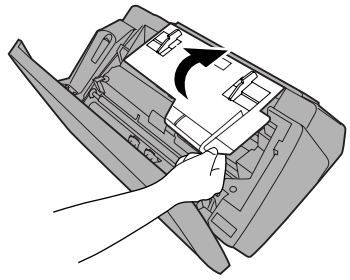
- Plugging the fax machine into a jack which is not jack may result in damage to the machine or your telephone system. If you do not know what kind of jack you have, or need to have one installed, contact the telephone company.

## 2. Removing the packing tape

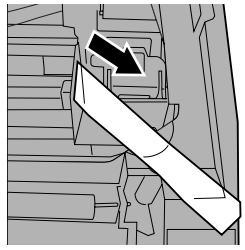
1) Open the operation panel.



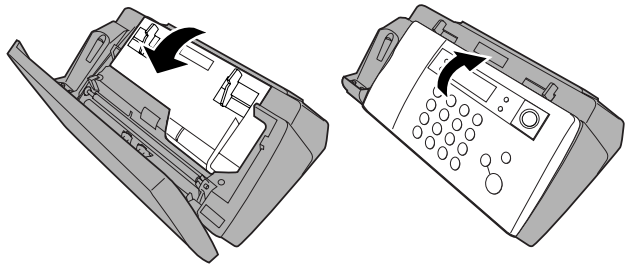
2) Open the print compartment cover.



3) Remove the tape.

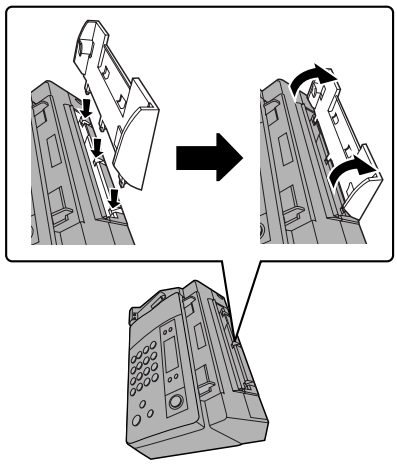


4) Close the print compartment cover and then the operation panel.

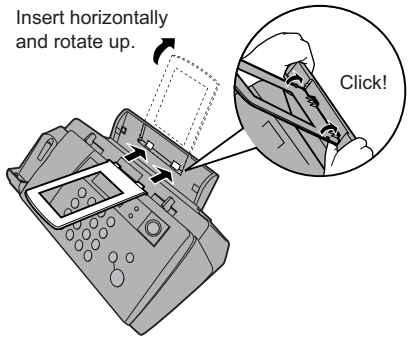


## 3. Attaching the paper tray

1) Attach the paper tray.

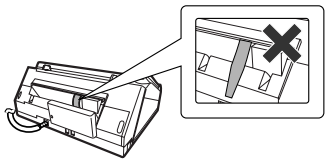


2) Attach the paper tray extension.




**Note:** The paper tray extension has a top side and a bottom side. If the tabs do not go into the holes, turn the support over.

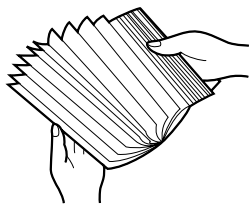
**Caution!**
Do not pull out the black plastic strip shown below. If the strip is pulled out, paper will not feed correctly.



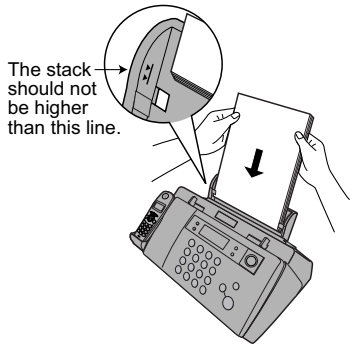
## 4. Loading printing paper

You can load up to 100 sheets **(UX-BD80DE/90DE/80IT)** / 50 sheets **(UX-BD80H/90H)** of A4-size paper (60 - 80 g/cm$^2$) in the paper tray (at room temperature; maximum stack height should not be higher than the line on the tray).

1) Fan the paper, and then tap the edge against a flat surface to even the stack. Make sure the stack edges are even.



2) Insert the stack of paper into the tray, PRINT SIDE UP.
   - If paper remains in the tray, take it out and combine it into a single stack with the new paper.
   - Be sure to load the paper so that printing takes place on the **print** side of the paper. Printing on the reverse side may result in poor print quality.
   - **GENTLY LOAD PAPER INTO THE PAPER TRAY.**
   - **DO NOT FORCE IT DOWN INTO THE FEED SLOT.**




**Note:** Do not use paper that has already been printed on, or paper that is curled.

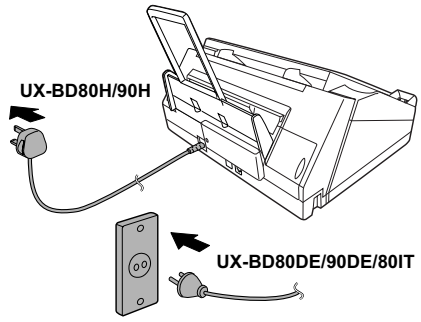
## 5. Connecting the power cord

Plug the power cord into a 220-230 V, 50 Hz, earthed AC (2-prong) outlet. **(UX-BD80DE/90DE/80IT)**

Plug the power cord into a 230 V, 50 Hz, earthed AC (3-prong) outlet. **(UX-BD80H/90H)**

**Caution!**

- **Make sure you have removed all of the packing tape before plugging in the power cord.** Plugging in the power cord without doing so may damage the machine.
- The power outlet must be installed near equipment and must be easily accessible.
- The machine does not have a power on/off switch, so the power is turned on and off by simply plugging in or unplugging the power cord.
- “CHECK CARTRIDGE” normally appears in the display the first time you plug in the machine. This message appears until you install the print cartridge.




**Note:** If you area experiences a high incidence of lightning or power surges, we recommend that you install surge protectors for the power and telephone lines. Surge protectors can be purchased at most telephone specialty stores.

About condensation: If the machine is moved from a cold to a warm place, it is possible that condensation may from on the scanning glass, preventing proper scanning of documents for transmission. To remove the condensation, turn on the power and wait approximately two hours before using the machine.

## 6. Installing the print cartridge

Follow these steps to install or replace the print cartridge.

- When replacing the print cartridge, be sure to use a **SHARP UX-C70B** cartridge.

**Print cartridge yield (at 4% coverage)**

**Initial cartridge**
Quality mode OFF: Approx. 300 A4 pages
Quality mode ON: Approx. 200 A4 pages

**Replacement cartridge (SHARP UX-C70B)**
Quality mode OFF: Approx. 600 A4 pages
Quality mode ON: Approx. 400 A4 pages

Quality mode is initially turned off. To turn on Quality mode, see page 1-8.

**Caution!** Do not open the print compartment cover or insert your hand in the machine while it is printing.

**Note:** Keep print cartridges sealed in their packages until you are ready to install them. It is recommended that you do not use a cartridge that has been left unused for a long time after opening, as the print quality may be considerably degraded.

- Make sure the machine's power cord is plugged in and paper is laded before installing or replacing the print cartridge.
- If a document is inserted in the feeder, remove the document before installing or replacing the print cartridge.

If PRINTER ERROR or PRINTER ERROR/CHECK PAPER appears...
In the event that the display shows either of the above messages, you must clear the error before installing the print cartridge. The error can usually be cleared by pressing STOP, or if a paper jam has occurred, by removing the paper jam.

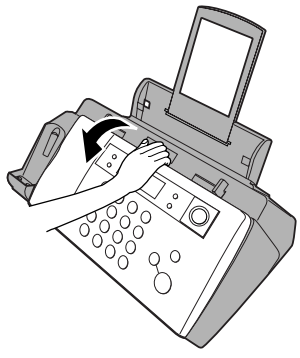
1) Press INK .
   - Make sure the cordless handset is not in use. If the cordless handset is in use, pressing INK will have no effect.
   - The print cartridge holder moves to the cartridge replacement position.

Display:

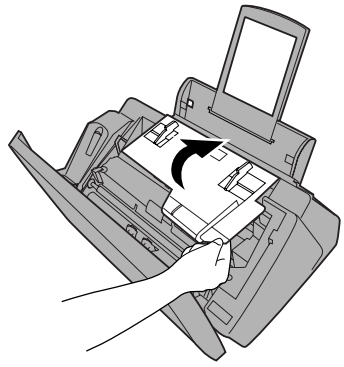
```
29-MAY 12:00
REPLACE INK &
```

```
29-MAY 12:00
PRESS INK KEY
```

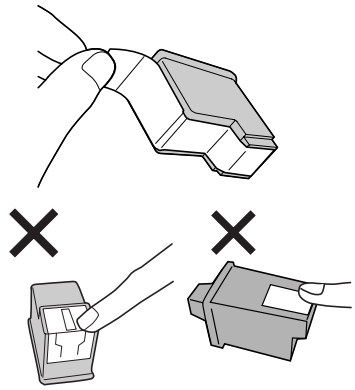
2) Open the operation panel.



3) Open the print compartment cover.

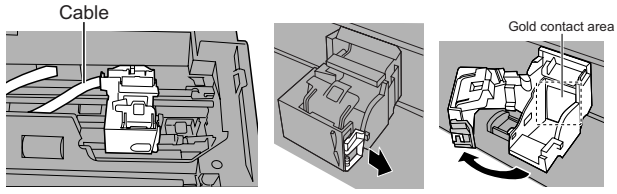


4) Remove only the tape from the new cartridge.
   - **Important:** Make sure you remove all of the tape.
   - **CAUTION! DO NOT** touch the gold contact area on the cartridge.

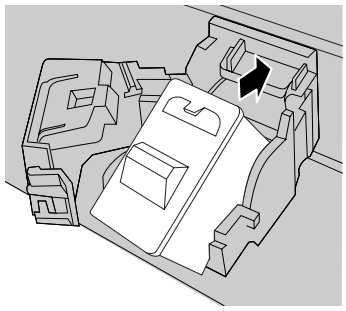


5) Make sure the cartridge holder has moved slightly away from the right side of the compartment, and then pull the green lever and open the cartridge holder cover.
   - If you are replacing the cartridge, remove the old cartridge. If you are going to use the old cartridge again, place it in an air-tight container.
   - **CAUTION! DO NOT** touch the contact area inside the cartridge holder, or pull on the cable that is connected to the cartridge holder.

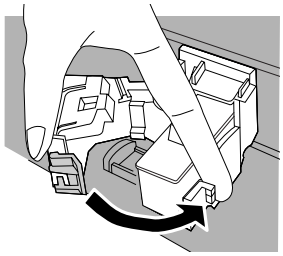
**Note:** If the print compartment cover is left open for approximately 30 minutes with a cartridge installed, the cartridge will automatically return to its home position. To make the cartridge return to the cartridge replacement position when this has happened, press INK .



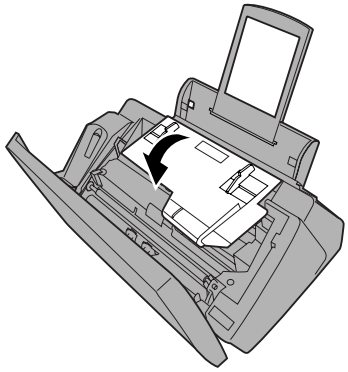
6) Insert the new print cartridge into the cartridge holder.



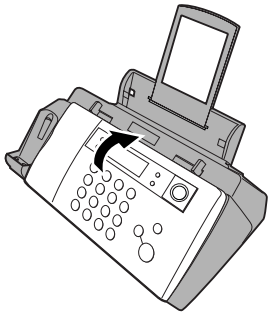
7) Place your index finger on the tab as shown and close the cartridge holder cover with your thumb. Make sure the cover clicks into place.



8) Close the print compartment cover.



9) Close the operation panel, pressing down firmly to make sure it clicks into place.



Display:

| |
|---|
| 29-MAY 12:00<br>REPLACE INK & |
| 29-MAY 12:00<br>PRESS INK KEY |

10)Press INK to make the print cartridge holder return to its home position.

| |
|---|
| 29-MAY 12:00<br>CHANGE CARTRIDGE |
| 29-MAY 12:00<br>1=NEW, 2=OLD |

11)Press 1 (NEW) if the cartridge you installed is new.

Press 2 ABC (OLD) if the cartridge you installed is old.

Display when "NEW" is selected:

| |
|---|
| 29-MAY 12:00<br>NEW CART. OK? |
| 29-MAY 12:00<br>OK: PRESS START |

12)Press START/MEMORY .

If you selected “OLD” in the previous step, this completes the installation procedure. (Note: If you find that print quality is not satisfactory after reinstalling the old cartridge, align the cartridge as explained.)

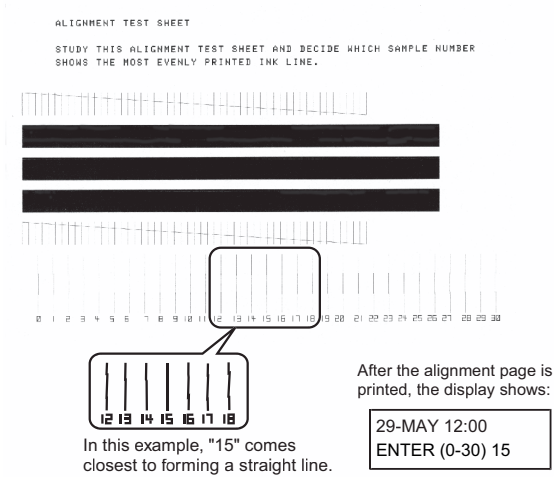
If you selected “NEW”, the display will show the alternating messages at right. Continue with the following steps to align the print cartridge.

Display when "NEW" is selected:

| |
|---|
| 29-MAY 12:00<br>ALIGN CARTRIDGE |
| 29-MAY 12:00<br>1=PRINT,2=SET |

13)Press 1 to print an alignment page. (To enter an alignment value without printing an alignment page, press 2 ABC .)

14)In the alignment page that the machine prints, locate the line that comes closest to forming a completely straight line.


ALIGNMENT TEST SHEET
STUDY THIS ALIGNMENT TEST SHEET AND DECIDE WHICH SAMPLE NUMBER SHOWS THE MOST EVENLY PRINTED INK LINE.
12 13 14 15 16 17 18

In this example, "15" comes closest to forming a straight line.

After the alignment page is printed, the display shows:

| |
|---|
| 29-MAY 12:00<br>ENTER (0-30) 15 |

15)Press the number keys to enter the number of the straightest line.

**Example:** (1) (5 JKL)

- If you make a mistake, press (STOP) and then repeat the entry.

16)Press (START/MEMORY) .

- This completes the alignment procedure.

**Note:** If at any time the display shows the alternating messages at right, check the printing paper. If the tray is empty, add paper. If there is paper in the tray, take it out and then reinsert it. When you are finished, press (START/MEMORY).

| |
|---|
| 29-MAY 12:00<br>ADD PAPER & |
| 29-MAY 12:00<br>PRESS START KEY |

## 7. Quality mode (using more/less ink)

If you prefer a higher quality image when printing faxes and copies, turn on Quality mode. If you wish to use less ink or speed up ink drying time, turn off Quality mode.

- Quality mode is initially turned off.

| | | Display: |
|---|---|---|
| **1** | **Press (F) once and (÷/A) 3 times.** | PRINT SET-UP |
| **2** | **Press (▷/A) once and (▽/−) twice.** | QUALITY MODE |
| **3** | **Press (▷/A) once.** | QUALITY MODE<br>1=ON, 2=OFF |
| **4** | **Press (1) to turn on Quality mode, or (2 ABC) to turn it off.** | The display briefly shows your selection, then:<br>HQ FAX PRINT |
| **5** | **Press (STOP) to return to the date and time display.** | |

## 8. High-quality fax print setting (fast/slow printing of faxes)

The high-quality fax print setting controls the speed at which faxes are printed. If you prefer a higher quality image at a slower printing speed, turn on this setting. If you prefer a faster printing speed over image quality, turn off the setting.

**Important:** This setting is only effective when Quality mode is turned on.

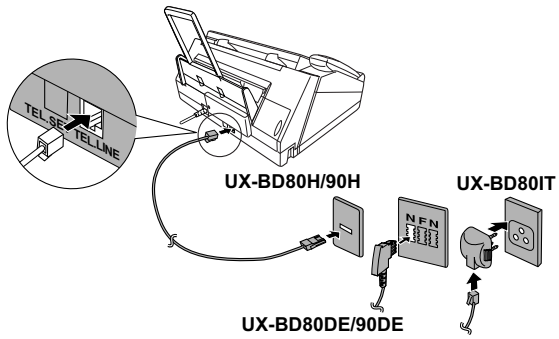
**Note:** This setting only affects the printing speed. It does not affect the amount of ink used.

- The high-quality fax print setting is initially turned on.

| | | Display: |
|---|---|---|
| **1** | **Press (F) once and (÷/A) 3 times.** | PRINT SET-UP |
| **2** | **Press (▷/A) once and (▽/−) 3 times.** | HQ FAX PRINT |
| **3** | **Press (▷/A) once.** | HQ FAX PRINT<br>1=YES, 2=NO |
| **4** | **Press (1) (YES) to turn on the setting, or (2 ABC) (NO) to turn it off.** | The display briefly shows your selection, then:<br>HQ COPY |
| **5** | **Press (STOP) to return to the date and time display.** | |

## 9. Connecting the telephone line cord

Insert one end of the line cord into the socket on the back of the machine marked **TEL. LINE**. Insert the other end into a wall telephone socket.



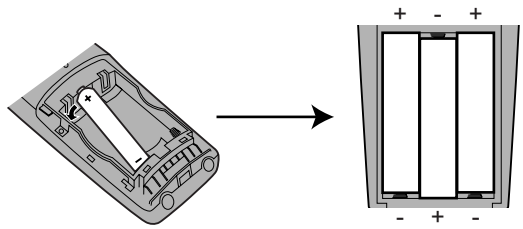

Be sure to insert the line into the **TEL. LINE** socket. **Do not** insert it into the **TEL. SET** socket!

**Note for Germany:** In Germany, the machine is supplied with a N-coded line cable, enabling you to use an extension (cordless) telephone on the same line. If you don't have the standard NFN-outlet of TELEKOM, you can purchase an NFN-adapter at your retailer.

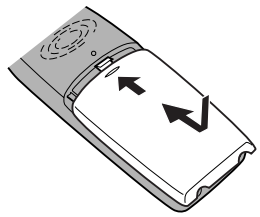
## 10. Installing the batteries and charging the cordless handset

- Be sure to read the battery precautions.

1) Insert the batteries into the cordless handset, making sure that the "+" and "-" sides are placed correctly.




2) Place the battery cover on the cordless handset, making sure it snaps firmly into place.



3) Place the cordless handset in the cradle on the machine with the dial pad facing up.

Charge the batteries at least **12** hours the first time!

- **Important!** The dial pad must face up, or the batteries will not charge.
- The batteries charges automatically while the cordless handset is in the cradle. While charging, the display shows: . When charging is finished, the battery icon appears full:
- The cordless handset may feel warm while charging. This is normal.
- The batteies cannot be overcharged. When not using the cordless handset, keep it in the cradle to ensure that it is always charged.
- When the batteries needs charging, will blink in the display and you will hear beeps during a phone conversation. If you need to continue the conversation, transfer the call to the machine or to another cordless handset. Place the cordless handset in the cradle and let it charge.

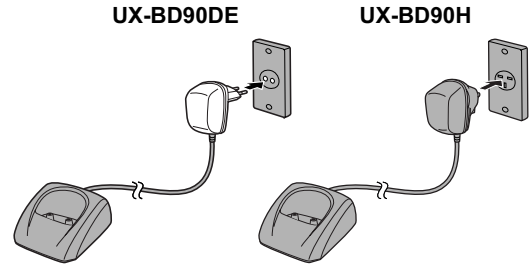
  **Note:** If the batteries are extremely low, nothing may appear in the display during the first several minutes that the cordless handset is in the cradle. The battery will begin to charge normally after several minures.
- To ensure that the battery charges properly, wipe the charger contacts once a month with a cotton swab.

## 11. Using the cordless handset charger (on models with a second cordless handset) (UX-BD90DE/H only)

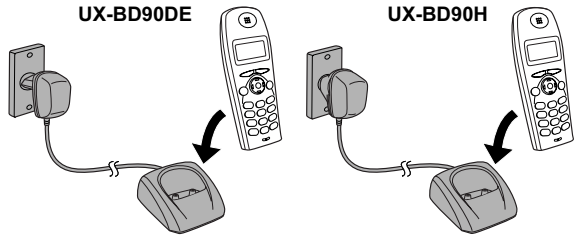
If your model includes a charger and a second cordless handset, install the batteries in the second cordless handset as explained in the previous section and then use the charger to charge the second cordless handset as explained below.

1) Plug the AC adapter into a standard 230 V AC outlet.

   **Important:** Never cover the charger and AC adapter with a blanket, cloth, or other material. Excessive heating may result and cause fire.



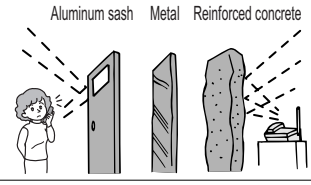

2) Place the cordless handset in the charger with the dial pad facing forward.
   - **Important!** The dial pad must face forward, or the batteries will not charge.
   - See Step 3 in the previous section for information on charging.




**Talking range**

The talking range of the cordless handset is approximately 200 m (line of sight; talking range may decrease depending on transmission conditions). If you hear noise or interference while talking on the cordless handset, move closer to the fax machine.

Large metal objects, metal structures, and thick walls reduce the talking range.



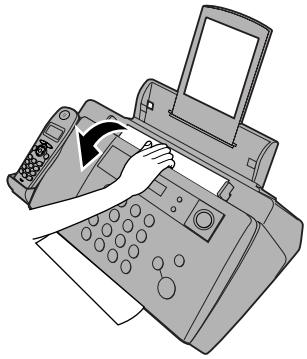
## 12. Clearing a jammed document

If the original document doesn't feed properly during transmission or copying, or DOCUMENT JAMMED appears in the display, first try pressing START/MEMORY. If the document doesn't feed out, remove it as explained below.

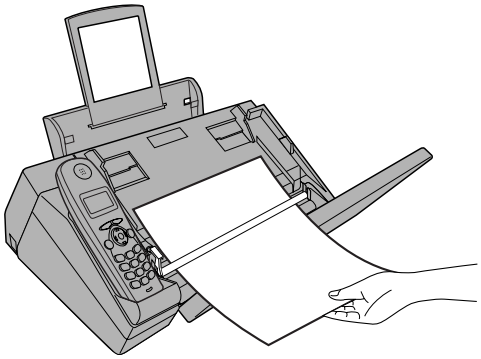
**Important:**

Do not try to remove a jammed document without releasing it as explained below. This may damage the feeder mechanism.

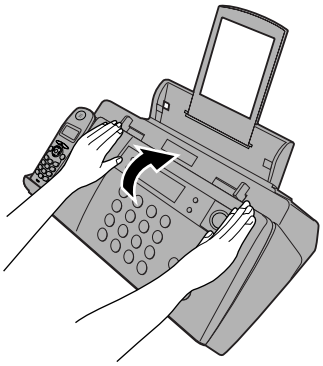
1) Open the operation panel.



2) Gently and remove the document.
   - Be careful not to tear the document.



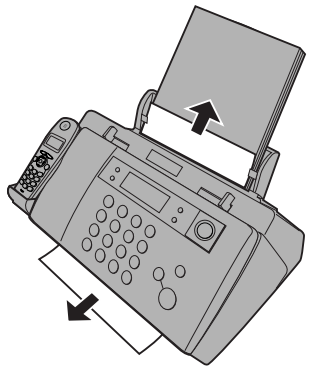
3) Close the operation panel, pressing down firmly to make sure it clicks into place.



## 13. Clearing jammed printing paper

Gently pull the jammed paper out of the machine, taking care not to tear it. After removing the jammed paper, press STOP to clear the error message (PAPER JAMMED) from the display.

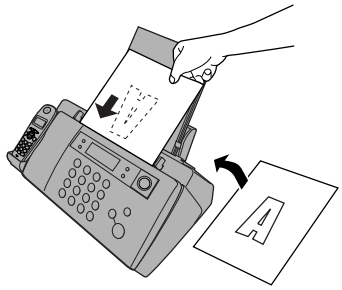
- Normal operation cannot be resumed until you press STOP to clear the error message.



# [6] Quick reference guide

## 1. Sending Faxes

Place your document (up to 10 pages) face down in the document feeder.



### 1.1. Normal Dialing

1. Lift the handset or press DIGITAL SPEAKERPHONE .
2. Dial the fax number.
3. Wait for the reception tone (if a person answers, ask them to press their Start key).
4. Press START/MEMORY .

### 1.2. Automatic Dialing

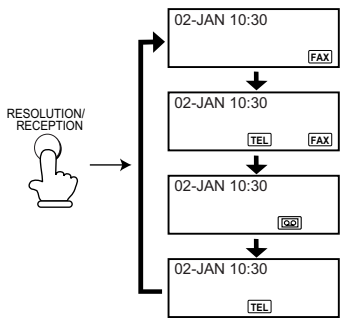
1. Press ▷A or Z◁ until the desired destination appears in the display.
2. Press START/MEMORY .

## 2. Recording an Outgoing Message

1. Press ●REC/MEMO , ▽ , and ▷A .
2. Pick up the cordless handset, press , and speak into the cordless handset.
3. When finished, press .

## 3. Receiving Faxes

Press the RESOLUTION/RECEPTION until the desired reception mode appears in the display.




**FAX mode:** The fax machine automatically answers and receives faxes.

**TEL mode:** Answer all calls (even faxes) on the cordless handset. To begin fax reception, press START/MEMORY .

**TEL/FAX mode:** The fax machine automatically answers and receives faxes. Voice calls are signalled by a special ringing sound.

**A.M. mode ( ):** Select this mode when you go out to receive both voice messages and faxes.

## 4. Storing Auto Dial Numbers

1. Press F once and ▷A twice.
2. Enter the full fax number and press START/MEMORY .
3. Enter a name by pressing number keys. (To enter two letters in succession that require the same key, press ▷A after entering the first letter.)

| | | | |
|---|---|---|---|
| SPACE = 1 | G = 4 | N = 6 | U = 8 |
| A = 2 | H = 4 4 | O = 6 6 | V = 8 8 |
| B = 2 2 | I = 4 4 4 | P = 7 | W = 9 |
| C = 2 2 2 | J = 5 | Q = 7 7 | X = 9 9 |
| D = 3 | K = 5 5 | R = 7 7 7 | Y = 9 9 9 |
| E = 3 3 | L = 5 5 5 | S = 7 7 7 7 | Z = 9 9 9 9 |
| F = 3 3 3 | M = 6 | T = 8 | |

4. Press START/MEMORY and then STOP .

## 5. Using the Cordless Phone

### 5.1. Making a phone call

1. Pick up the cordless handset and press .
2. When you hear the dial tone, dial the number.
3. When you are ready to end the call, press .

### 5.2. Making a phone call using automatic dialing

1. Press once.
2. Press ▲ or ▼ until the number you wish to dial appears in the display.
3. Press .

### 5.3. Receiving a phone call

1. When the cordless handset rings, pick it up and press .
2. When you are ready to end the call, press .

### 5.4. Receiving a fax using the cordless handset

If you hear a fax tone after answering a call on the cordless handset, or if the other party speaks to you and then wants to send a fax, press .

### 5.5. Storing auto dial numbers

1. Press ▼ and then press ▶ twice.
2. Enter a name for the auto-dial number. To enter each letter, hold down the key for the letter as shown in the chart below until the letter appears in the display.

| | | |
|---|---|---|
| **SPACE, PAUSE (⎓), - =** 0 | **M, N, O =** 6MNO | **# (␣), ?, _ =** # |
| **A, B, C =** 2ABC | **P, Q, R, S =** 7PQRS | |
| **D, E, F =** 3DEF | **T, U, V =** 8TUV | |
| **G, H, I =** 4GHI | **W, X, Y, Z =** 9WXYZ | |
| **J, K, L =** 5JKL | *** =** * | |

3. Press ▶ .
4. Enter the full fax/phone number. To clear a mistake, press ◀ .

   To insert a pause, hold down 0 until " ⎓ " appears.
5. Press ▶ and then ◀ repeatedly to exit.

### 5.6. Listening to messages

1. Press ▲ and then press ▶ .
2. Press 7PQRS to listen to all your messages, or 8TUV to listen to only your new messages.
3. While listening, you can do the following:

   Repeat a message: Press * .

   Skip a message: Press 0 .

   Delete a message: Press # while the message is playing.

   Stop playback: Press 9WXYZ .
4. When finished, press ◀ repeatedly to exit.

# CHAPTER 2. ADJUSTMENTS

## [1] Adjustments

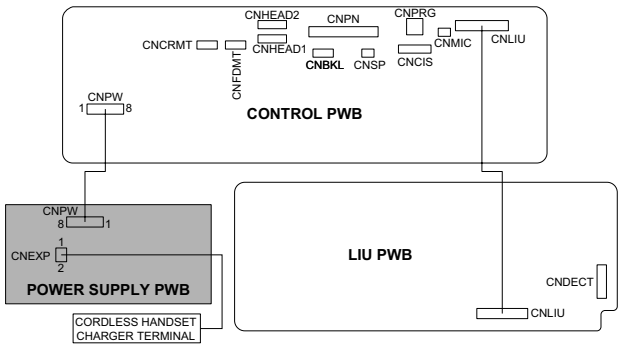
### 1. General

Since the following adjustments and settings are provided for this model, make adjustments and/or setup as necessary.

### 2. Adjustments of output voltage (FACTORY ONLY)

1. Install the power supply unit in the machine.
2. Set the recording paper and document.
3. When the document is loaded, power is supplied to the output lines. Confirm that outputs are within the limits below.

#### 2.1. Output voltage settings




| Output | Voltage limits |
|---|---|
| +5V | 4.75V ~ 5.25V |
| +30V | 27.0V ~ 33.0V |
| +8.5V(*) | 8.0V ~ 12.0V |

| Connector No. / Pin No. | CNPW |
|---|---|
| 1 | +30V |
| 2 | +30V |
| 3 | MG |
| 4 | MG |
| 5 | DG |
| 6 | DG |
| 7 | +5V |
| 8 | +5V |

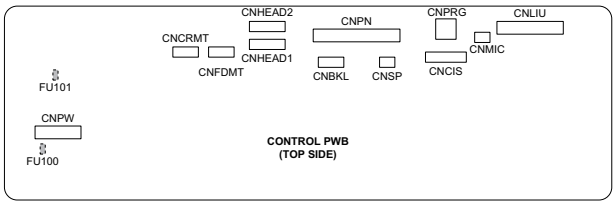
| Connector No. / Pin No. | CNEXP |
|---|---|
| 1 | +8.5V |
| 2 | VSS |

(*): For checking this voltage, you must measure the voltage of the both pins of "CNEXP", because "Vss" is insulated with the other ground voltage source (DG or MG). If not, you cannot test the voltage correctly.

### 3. IC protectors replacement

ICPs (IC Protectors) are installed to protect the motor driver circuit. ICPs protect various ICs and electronic circuits from an overcurrent condition.

The location of ICPs are shown below:




1) FU100 (KAB5002) is installed in order to protect IC's from an overcurrent generated in the motor drive circuit. If FU100 is open, replace it with a new one.
2) FU101 (KAB3202) is installed in order to protect IC's from an overcurrent generated in the motor drive circuit. If FU101 is open, replace it with a new one.

### 4. Settings

#### 4.1. Dial mode selector

DIAL mode (Soft Switch No. SW-B4 Data No. 3)

Setting is not required since the required mode is TONE ONLY.

### 5. Volume adjustments (Fax machine)

You can adjust the volume of the speaker, and ringer using the UP and DOWN arrow keys.

#### 5.1. Fax machine Speaker

**1** Press DIGITAL SPEAKERPHONE.

**2** Press ▲ or ▼ to select the desired volume level.

- Press DIGITAL SPEAKERPHONE again to turn off the speaker.

#### 5.2. Fax machine Ringer

**1** **Press ▲ or ▼ to select the desired volume level.**
**(Make sure MONITOR has not been pressed and a document is not loaded in the feeder.)**

- The ringer will ring once at the selected level.

Display:

29-MAY 12:00
RINGER: HIGH
↕
29-MAY 12:00
RINGER: MIDDLE
↕
29-MAY 12:00
RINGER: LOW
↕
29-MAY 12:00
RINGER: OFF OK ?

**2** **If you selected RINGER: OFF OK ? to turn off the ringer, press START/MEMORY.**

**Note:** When the reception mode is set to TEL, the ringer will still ring at LOW if turned off.

### 6. Volume adjustments (Cordless handset)

You can select the volume of the ringer and cordless handset, as well as adjust the ringer volume or turn it off.

#### 6.1. Cordless handset ringer

**1** **Press ▼ 3 times.**

Cordless handset display:
3 RING

**2** **Press ▶ once and then ▼ once.**

32 VOLUME

**3** **Press ▶ once.**

3

**4** **Press ▲ or ▼ to select a volume level from 1 to 4 and then press ▶.**
**(You can also simply enter the number of the desired volume level.)**

DONE

**5** **Press ◀ repeatedly to exit.**

# [2] Diagnostics and service soft switch

## 1. Entering the diagnostic mode

Press FUNC → 9 → ✳ → 8 → # → 7, and the following display will appear.

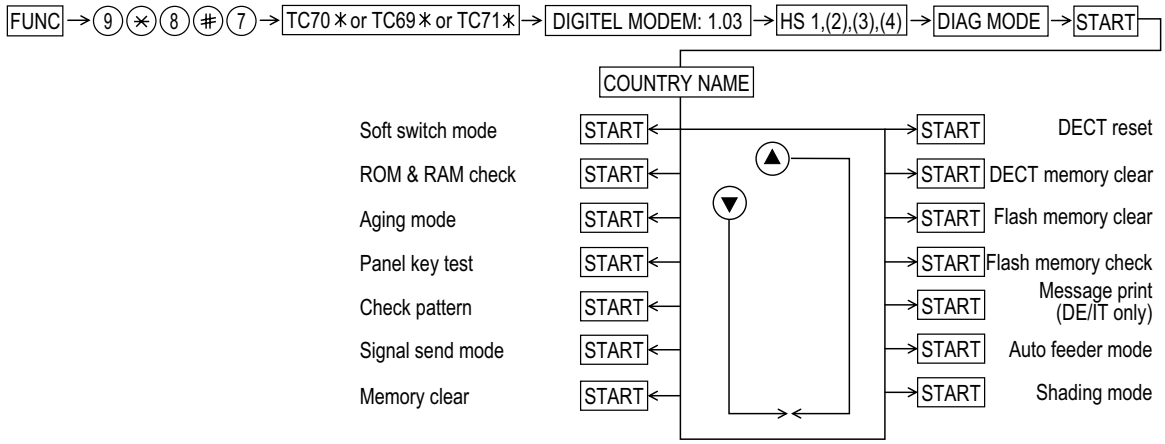
ROM Ver.:TC70 Ж or TC69 Ж or TC71 Ж After 2 sec: DIGITAL MODEM: 1.03 After 2 sec: HS 1 After 2 sec: DIAG MODE

- DIGITAL MODEM: 1.03 → Firmawre version of Cordless PWB
- HS 1 → Connected Cordless handset Ex.: When 4 cordless handset are connected: "HS 1 2 3 4"

TC70 Ж (UX-BD80DE/90DE)
TC69 Ж (UX-BD80H/90H)
TC71 Ж (UX-BD80IT)

Then press the START key. Select the desired item with the UP key or the DOWN key or select with the rapid key. Enter the mode with the START key.

(Diag· specifications)


FUNC → 9 ✳ 8 # 7 → TC70 Ж or TC69 Ж or TC71 Ж → DIGITEL MODEM: 1.03 → HS 1,(2),(3),(4) → DIAG MODE → START
COUNTRY NAME
Soft switch mode
ROM & RAM check
Aging mode
Panel key test
Check pattern
Signal send mode
Memory clear
START
DECT reset
DECT memory clear
Flash memory clear
Flash memory check
Message print (DE/IT only)
Auto feeder mode
Shading mode

If the diag mode cannot be set, repeat the diag mode operation, performing the following operation.
After the power is turned on and "WAIT A MOMENT" is indicated, press the STOP key.

"Power ON" + STOP KEY → START/MEMORY KEY

In relation with the process response (request from Production Engineering) "WAIT A MOMENT" clock indication may appear depending on STOP key timing. If the STOP key is held down, "MEMORY CLEAR?" appears.

## 2. Diagnostic items

| ITEM No. | Contents | Function |
|---|---|---|
| 1 | SOFT SWITCH MODE | Soft switches are displayed and changed. List can be output. |
| 2 | ROM & RAM CHECK | ROM sum-check and RAM is matched. Result list is output. |
| 3 | AGING MODE | 10 sheets of check patterns are output every 5 minutes per sheet. |
| 4 | PANEL KEY TEST | Panel keys are tested. Result list is output. |
| 5 | CHECK PATTERN | Check pattern is output. |
| 6 | SIGNAL SEND MODE | Various signals of FAX communication are output. |
| 7 | MEMORY CLEAR | Back-up memory is cleared, and is set at delivery. |
| 8 | SHADING MODE | Shading compensation is performed in this mode. |
| 9 | AUTO FEEDER MODE | Insertion and discharge of document are tested. |
| 10 | MESSAGE PRINT (DE/IT ONLY) | The display message of each language is printed out together with the English equivalent. (DE/IT ONLY) |
| 11 | FLASH MEMORY CHECK | Checks flash memory write/read. |
| 12 | FLASH MEMORY CLEAR | Checks flash memory clearing. |
| 13 | DECT MEMORY CLEAR | Clear all DECT registration & PIN. |
| 14 | DECT RESET | Reset the cordless PWB. |

## 3. Diagnostic items description

### 3.1. Soft switch mode

Used to change the soft switch settings.
The soft switch which is stored internally is set by using the keys.
The available soft switches are SW-A1 to SW-P7.
The content of soft switches is shown in Soft switch description.
The contents are set to factory default settings.

### 3.2. ROM & RAM check

ROM executes the sum check, and RAM executes the matching test.

The result will be notified with the number of short sounds of the buzzer as well as by printing the ROM & RAM check list.

Number of short sounds of buzzer 0 → No error
1 → FAX engine ROM error
2 → RAM error

(4Kbytes SRAM or 512Kbytes DRAM)

### 3.3. Aging mode

The check pattern will be printed sheet by sheet. This operation will be executed at a rate of one sheet per 5 minutes, and will be ended at a total of 10 sheets.

### 3.4. Panel key test

This mode is used to check whether each key operates properly. Press the key on the operation panel, and the key will be displayed on the LCD. Therefore, press all keys. At this time, finally press the STOP key. When the STOP key is pressed, the keys that are not judged as "pressed" will be printed on the result list.

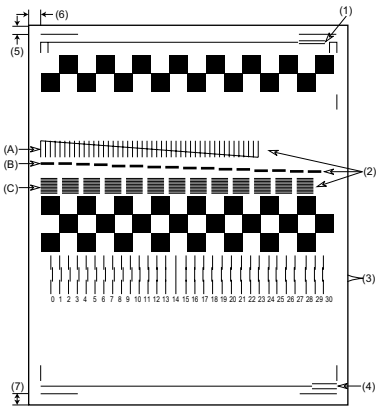
- LED part of the contact image sensor (CIS) is kept on during the term from when "START" of the panel test mode to end with the STOP key.

### 3.5. Check pattern

Check patterns are printed on one sheet. Printing performance:The following 4 items are checked.

- Print area:Checks that the print area is reserved.
- Nozzles:When checking the nozzle, make sure at least 1 line is printed in each block: all the blocks of horizontal black bars and the black line patterns in (B) and (C) ((B):16 patterns, (C):13 patterns). (Note: If the nozzle (A) is not spraying properly, checking the area (B) and (C) may be difficult (or may not be printed at all). In this case, print again.
- Vertical align:Checks that the straight vertical line is drawn instead of crooked line.
- Skew:Checks the skew of the recording paper.

Detailed of check patterns
(1)Top skew (2)Nozzle test (3)Vertical lines (4)Bottom skew
(5)Top margin (6)Left margin (7)Bottom margin




### 3.6. Signal send mode

This mode is used to send various signals to the circuit during FAX communication. Every push of START key sends a signal in the following sequence. Moreover, the signal sound is also output to the speaker when the line monitor of the soft switch is on.

[1] No signals
[2] 14400BPS (V.33)
[3] 12000BPS (V.33)
[4] 14400BPS (V.17)
[5] 12000BPS (V.17)
[6] 9600BPS (V.17)
[7] 7200BPS (V.17)
[8] 9600BPS (V.29)
[9] 7200BPS (V.29)
[10] 4800BPS (V.27ter)
[11] 2400BPS (V.27ter)
[12] 300BPS (FLAG)
[13] 2100Hz (CED)
[14] 1100Hz (CNG)
[15] 1300Hz (V.23 MARK)
[16] 2100Hz (V.23 SPACE)
[17] PSEUDO RINGER
[18] General OGM play (If general OGM is recorded)

### 3.7. Memory clear

This mode is used to clear the backup memory and reset to the default settings.

### 3.8. Shading mode

The mode is used for the shading compensation. For reading, set up the special original paper. (Refer to page 8-3)
The compensation memorizes the reference data of white and black for reading.
Moreover, the memorized data is not erased even if memory clear mode is executed.

### 3.9. Auto feeder mode

In this mode, a document is inserted and discharged to check the auto feed function.

After this mode is started, set a document, and the document feed will be automatically tested.

### 3.10. Message print (DE/IT only)

In this mode, all the message data, which are used for displaying indication and list print are printed as a contrast table of the selected language and English.

### 3.11. Flash memory check

Data is written into and read from the flash memory to check data conformity. When the unit enters this mode, the check is started.

### 3.12. Flash memory clear

Data in the flash memory is cleared (memory clear). When the unit enters this mode, the check is started.

*Operation of hardware and signal in the flash memory check mode and flash memory clear mode, and the result of check.

The result is announced by the buzzer beeps. The result of check is printed.

Beeps1 → Memory error

### 3.13. DECT memory clear

Registration of all DECT Cordless Handset and PIN are cleared.

### 3.14. DECT reset

After pressing “START” key, hardware reset for the Cordless PWB is done. This is the same reset done when main power is ON. This is used when you want to reset only the Cordless PWB without main power OFF/ON.

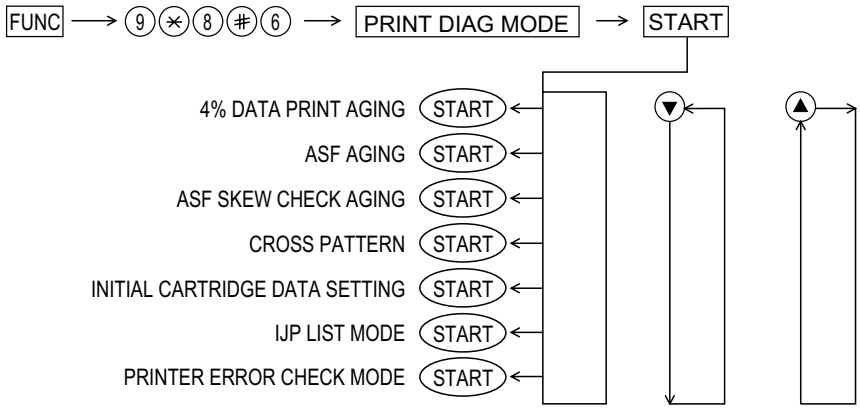
## 4. Entering the printer diagnostic mode

Press [FUNC] → [9] → [⊗] → [8] → [#] → [6] , and the following display will appear.

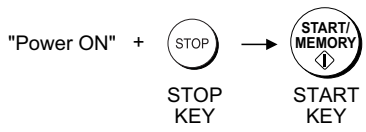
[PRINT DIAG MODE]

Then press the [START] key. Select the desired item with the up key or the down key or select with the rapid key. Enter the mode with the START key.

(Diag· specifications)




If the diagnostic mode cannot be set, repeat the diagnostic mode operation, performing the following operation.
After the power is turned on and "WAIT A MOMENT" is indicated, press the STOP key.




In relation with the process response (request from Production Engineering) "WAIT A MOMENT" clock indication may appear depending on STOP key timing. If the STOP key is held down, "MEMORY CLEAR?" appears.

## 5. Printer diagnostic items

| Item No. | Contents | Function |
|---|---|---|
| 1 | 4% DATA PRINT AGING | 4% of printing data continue to be printed. |
| 2 | ASF AGING | The feed of the paper is continued. |
| 3 | ASF SKEW CHECK AGING | The frame pattern continues to be printed to check the inclination performance. |
| 4 | CROSS PATTERN | The image data of the cross pattern to be printed. |
| 5 | INITIAL CARTRIDGE DATA SETTING | It makes the dot counter the setting for the initial cartridge. |
| 6 | IJP LIST MODE | The maintenance data is printed. |
| 7 | PRINTER ERROR CHECK MODE | The cause of “PRINTER ERROR” message is displayed. |

## 6. Printer diagnostic items description

### 6.1. 4% data print aging

This mode is the aging mode that prints the text pattern of 4%

### 6.2. ASF aging (all white)

This mode is the aging mode that tests the performance of the ASF function.

### 6.3. ASF skew check aging

This mode is the aging mode that tests the performance of the ASF function.

Detailed of check patterns

1. Top skew
2. Bottom skew
3. Top margin
4. Bottom margin

### 6.4. Cross pattern

This mode prints the test pattern that tests the performance of the printer.

### 6.5. Initial cartridge data setting

This mode makes the dot counter the setting for initial cartridge, and this mode resets the following counter.

1. Replacement counter of the cartridge
2. Paper jam counter

### 6.6. IJP list mode

Maintenance data of the printer is output.

[Details of maintenance data]

| Item | Clear timing | Update timing |
|---|---|---|
| Dot counter | At the replacement cartridge | After printing |
| Page counter | At the replacement cartridge | After printing |
| Number of head cleaning (Wiping of cartridge) | At the initial cartridge setting | At the maintenance |
| Replacement counter of the cartridge | At the initial cartridge setting | At the replacement of cartridge |
| Jam counter | At the initial cartridge setting | At every paper jam |

### 6.7. Printer error check mode

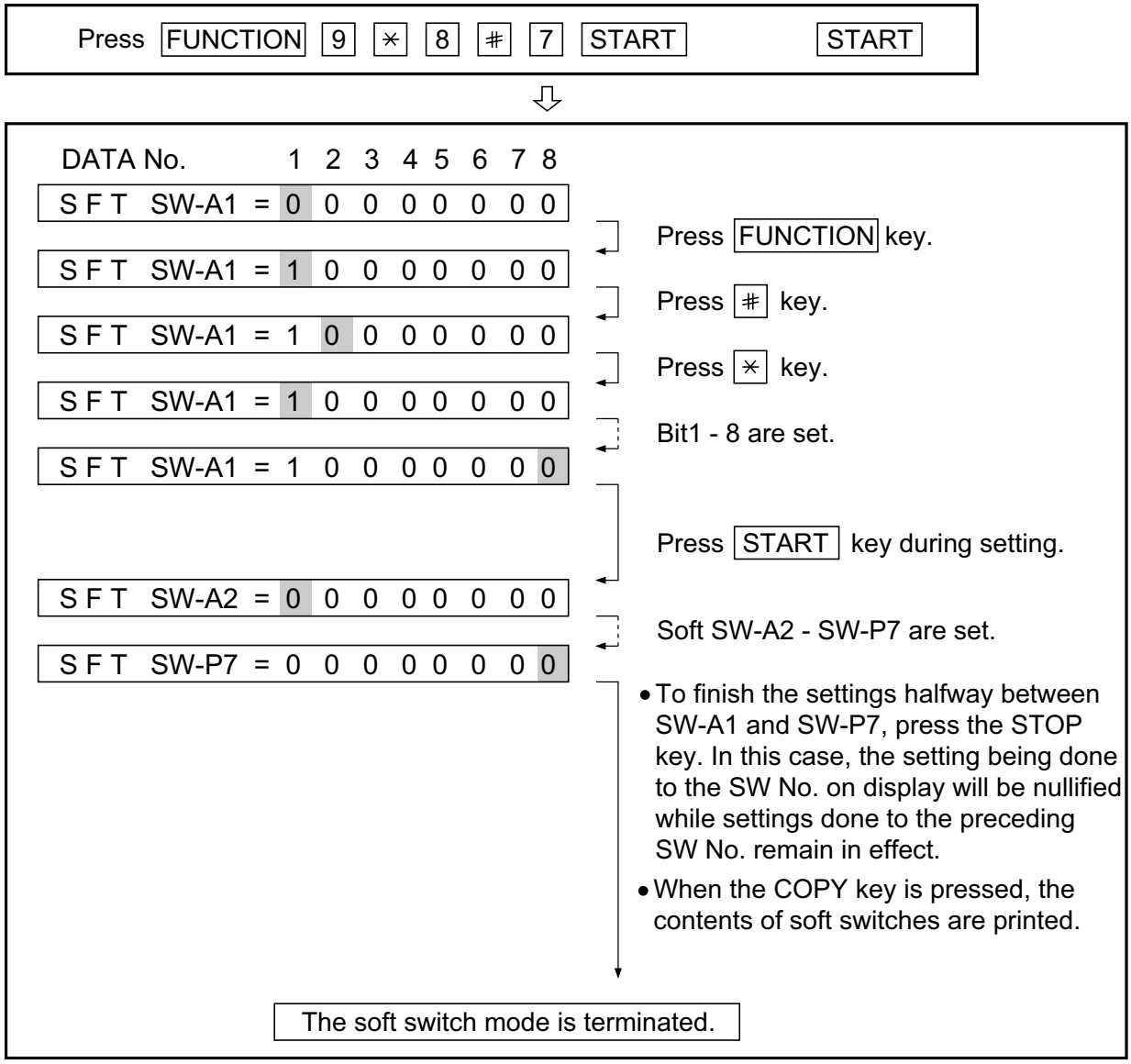
The cause of “PRINTER ERROR” message is displayed.

[Details of Display]

| Display | Cause of “PRINTER ERROR” message |
|---|---|
| PRINTER ERR 01 | Power on reset response was not received from printer. |
| PRINTER ERR 02 | Print data transfer from Printer interface ASIC to printer was not completed for 180 sec. |
| PRINTER ERR 03 | Cap position check of the carrier is failed. |
| PRINTER ERR 04 | Printing 1 page is not finished during 5 min. |
| PRINTER ERR 05 | Carrier moving from cartridge change position to cap position is failed. |
| PRINTER ERR 06 | Carrier moving to cartridge change position is failed. |
| PRINTER ERR 07 | Cartridge replacement is failed. |
| PRINTER ERR 08 | Cartridge ID check is failed. |
| PRINTER ERR 09 | Carrier was not reached to cap position for 60 sec after last printed page was exited. |
| PRINTER ERR 10 | Paper pick up is failed. |
| PRINTER ERR 20 | Carrier stall error. |
| PRINTER ERR 21 | Carrier stall error. |
| PRINTER ERR 22 | Carrier stall error. |
| PRINTER ERR 23 | Carrier stall error. |
| PRINTER ERR 24 | Printer head short error. |
| PRINTER ERR 25 | Printer head heater control is failed. |
| PRINTER ERR 26 | Print start position setting is abnormal. |

## 7. How to make soft switch setting

To enter the soft switch mode, press the following key entries in sequence.


Press FUNCTION 9 ✳ 8 # 7 START START
DATA No. 1 2 3 4 5 6 7 8
S F T SW-A1 = 0 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A1 = 1 0 0 0 0 0 0 0
S F T SW-A2 = 0 0 0 0 0 0 0 0
S F T SW-P7 = 0 0 0 0 0 0 0 0
Press FUNCTION key.
Press # key.
Press ✳ key.
Bit1 - 8 are set.
Press START key during setting.
Soft SW-A2 - SW-P7 are set.
• To finish the settings halfway between SW-A1 and SW-P7, press the STOP key. In this case, the setting being done to the SW No. on display will be nullified while settings done to the preceding SW No. remain in effect.
• When the COPY key is pressed, the contents of soft switches are printed.
The soft switch mode is terminated.

## 8. Soft switch description

### 8.1. Soft switch

| SW NO. | DATA NO. | ITEM | Switch setting and function | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 0 | DE | H | IT | |
| SW I A1 | 1 | Protect from echo | No | Yes | 0 | 0 | 0 | |
| | 2 | Forced 4800 BPS reception | Yes | No | 0 | 0 | 0 | |
| | 3 | Footer print | Yes | No | 0 | 0 | 0 | |
| | 4 | Length limitation of copy/send/ receive | No limit | Copy/send: 60 cm<br>Receive: 1 m | 0 | 0 | 0 | |
| | 5 | CSI transmission | No transmitted | Transmitted | 0 | 0 | 0 | |
| | 6 | DIS receive acknowledgement during G3 transmission | Twice | NSF: Once<br>DIS: Twice | 0 | 0 | 0 | |
| | 7 | Non-modulated carrier for V29 transmission mode | Yes | No | 0 | 1 | 0 | |
| | 8 | EOL detect timer | 25sec | 13sec | 0 | 0 | 0 | |
| SW I A2 | | Modem speed | | No. 1 / No.2 / No. 3 / No. 4 | | | | |
| | | | V.33 14400bps | 0 / 1 / 0 / 0 | | | | |
| | | | V.33 12000bps | 0 / 1 / 1 / 0 | | | | |
| | | | V.17 14400bps | 1 / 0 / 0 / 0 | | | | |
| | | | V.17 12000bps | 1 / 0 / 1 / 0 | | | | |
| | | | V.17 9600bps | 1 / 0 / 0 / 1 | | | | |
| | | | V.17 7200bps | 1 / 0 / 1 / 1 | | | | |
| | | | V.29 9600bps | 0 / 0 / 0 / 1 | | | | |
| | | | V.29 7200bps | 0 / 0 / 1 / 1 | | | | |
| | | | V.27ter 4800bps | 0 / 0 / 1 / 0 | | | | |
| | | | V.27ter 2400bps | 0 / 0 / 0 / 0 | | | | |
| | 1 | | | | 1 | 1 | 1 | |
| | 2 | | | | 0 | 0 | 0 | |
| | 3 | | | | 0 | 0 | 0 | |
| | 4 | | | | 0 | 0 | 0 | |
| | 5 | Sender's information transmit | No | Yes | 0 | 0 | 0 | |
| | 6 | Reserved | | | 0 | 0 | 0 | |
| | 7 | Communication error treatment in RTN sending mode (reception) | No communication error | Communication error | 0 | 1 | 0 | |
| | 8 | CNG transmission | No | Yes | 0 | 0 | 0 | |
| SW I A3 | | CED tone signal interval | 1000ms / 750ms / 500ms / 75ms | | | | | |
| | | | No. 1: 1 / 1 / 0 / 0 | | | | | |
| | | | No. 2: 1 / 0 / 1 / 0 | | | | | |
| | 1 | | | | 0 | 0 | 0 | |
| | 2 | | | | 0 | 1 | 0 | |
| | 3 | MR coding | No | Yes | 0 | 0 | 0 | |
| | 4 | ECM mode | No | Yes | 0 | 0 | 0 | OPTION |
| | 5 | ECM MMR | No | Yes | 0 | 0 | 0 | |
| | 6 | Reserved | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | 0 | 0 | 0 | |
| SW I A4 | 1 | Signal transmission level | Binary input<br>No. = 16 8 4 2 1<br>1 2 3 4 5<br>EX 0 1 0 0 1 | | 0 | 0 | 0 | |
| | 2 | | | | 1 | 1 | 1 | |
| | 3 | | | | 0 | 0 | 0 | |
| | 4 | | | | 0 | 0 | 0 | |
| | 5 | | | | 1 | 1 | 1 | |
| | 6 | Protocol monitor (Error print) | Printed at communication error | Not printed | 0 | 0 | 0 | |
| | 7 | Protocol monitor | Yes | No | 0 | 0 | 0 | |
| | 8 | Line monitor | Yes | No | 0 | 0 | 0 | |
| SW I A5 | | Digital line equalization setting (Reception) | | 7.2km / 3.6km / 1.8km / 0km | | | | |
| | | | No. 1 | 1 / 1 / 0 / 0 | | | | |
| | | | No. 2 | 1 / 0 / 1 / 0 | | | | |
| | 1 | | | | 0 | 0 | 0 | |
| | 2 | | | | 1 | 1 | 1 | |
| | | Digital line equalization setting (Transmission) | | 7.2km / 3.6km / 1.8km / 0km | | | | |
| | | | No. 3 | 1 / 1 / 0 / 0 | | | | |
| | | | No. 4 | 1 / 0 / 1 / 0 | | | | |
| | 3 | | | | 0 | 0 | 0 | |
| | 4 | | | | 1 | 1 | 1 | |
| | | Digital cable equalizer setting (Reception for Caller ID) | | 7.2km / 3.6km / 1.8km / 0km | | | | |
| | | | No. 5 | 1 / 1 / 0 / 0 | | | | |
| | | | No. 6 | 1 / 0 / 1 / 0 | | | | |
| | 5 | | | | 0 | 0 | 0 | |
| | 6 | | | | 0 | 0 | 0 | |
| | 7 | Error criterion | 10 ~ 20% | 5 ~ 10 % | 0 | 0 | 0 | |
| | 8 | Anti junk fax check | Yes | No | 1 | 1 | 1 | |

| SW NO. | DATA NO. | ITEM | Switch setting and function | | | | | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | | | 0 | | | DE | H | IT | |
| SW I A6 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 3 | Disconnect the line when DIS is received in RX mode | No | | | Yes | | | 1 | 1 | 1 | |
| | 4 | Equalizer freeze control (MODEM) | On | | | Off | | | 0 | 0 | 0 | |
| | 5 | Equalizer freeze control 7200 BPS only | No | | | Yes | | | 0 | 0 | 0 | |
| | 6 | CNG transmission in manual TX mode | Yes | | | No | | | 1 | 1 | 1 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Modem speed automatic fallback when RX level is under -40dBm | Yes | | | No | | | 0 | 0 | 0 | |
| SW I B1 | 1<br>2<br>3<br>4 | Recall interval | Binary input<br>No. = 8 4 2 1<br>1 2 3 4<br>EX 0 1 0 1 | | | | | | 0<br>1<br>0<br>1 | 0<br>1<br>0<br>1 | 0<br>1<br>0<br>1 | |
| | 5<br>6<br>7<br>8 | Recall times | Binary input<br>No. = 8 4 2 1<br>5 6 7 8<br>EX 0 0 1 1 | | | | | | 0<br>0<br>1<br>1 | 0<br>0<br>1<br>1 | 0<br>0<br>1<br>1 | |
| SW I B2 | 1 | Dial pausing (sec/pause) | 4 sec | | | 2 sec | | | 1 | 1 | 1 | |
| | 2 | Dial tone detection (before auto dial) | No | | | Yes | | | 1 | 1 | 1 | |
| | 3 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 4 | Busy tone detection (after auto dial) | No | | | Yes | | | 1 | 1 | 1 | |
| | 5<br>6 | Waiting time after dialing | | 45 sec | 55 sec | 90 sec | 140 sec | | | | | |
| | | | No. 5 | 0 | 0 | 1 | 1 | | 1 | 1 | 1 | |
| | | | No. 6 | 0 | 1 | 0 | 1 | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I B3 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6<br>7 | Auto dial mode delay timer of before line connect | | 0 sec | 1.5 sec | 3.0 sec | 4.5 sec | | | | | |
| | | | No. 6 | 0 | 0 | 1 | 1 | | 0 | 0 | 0 | |
| | | | No. 7 | 0 | 1 | 0 | 1 | | 1 | 1 | 1 | |
| | 8 | Hold key | Enable | | | Disable | | | 1 | 1 | 1 | |
| SW I B4 | 1<br>2 | Auto dial mode delay timer of after line connect | | 1.7 sec | 3.0 sec | 3.6 sec | 4.0 sec | | | | | |
| | | | No. 1 | 0 | 0 | 1 | 1 | | 1 | 1 | 1 | |
| | | | No. 2 | 0 | 1 | 0 | 1 | | 1 | 1 | 1 | |
| | 3 | Dial mode | Tone | | | Pulse | | | 1 | 1 | 1 | |
| | 4 | Pulse → Tone change function by ✳ key | Enable | | | Disable | | | 1 | 1 | 1 | |
| | 5 | Dial pulse make/break ratio (%) | 40/60 | | | 33/67 | | | 1 | 0 | 1 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Recalling fixed only one time when dialing was unsuccessful without detecting busy tone signal | Yes | | | No | | | 0 | 0 | 0 | |

| SW NO. | DATA NO. | ITEM | Switch setting and function | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 0 | DE | H | IT | |
| SW I B5 | 1 | DTMF signal transmission level (Low) | Binary input<br>No. = 16 8 4 2 1<br>1 2 3 4 5<br>EX 0 1 1 1 0 | | 0 | 0 | 0 | |
| | 2 | | | | 1 | 1 | 1 | |
| | 3 | | | | 1 | 1 | 1 | |
| | 4 | | | | 1 | 1 | 1 | |
| | 5 | | | | 0 | 0 | 0 | |
| | 6 | Dial pulse format | N+1 format | N format | 0 | 0 | 0 | |
| | 7 | FLASH send time | Long time (250ms) | Short time (90ms) | 1 | 0 | 0 | OPTION |
| | 8 | Reserved | | | 0 | 0 | 0 | |
| SW I B6 | 1 | DTMF signal transmission level (High) | Binary input<br>No. = 16 8 4 2 1<br>1 2 3 4 5<br>EX 0 1 0 1 1 | | 0 | 0 | 0 | |
| | 2 | | | | 1 | 1 | 1 | |
| | 3 | | | | 0 | 0 | 0 | |
| | 4 | | | | 1 | 1 | 1 | |
| | 5 | | | | 1 | 1 | 1 | |
| | 6 | Reserved | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | 0 | 0 | 0 | |
| SW I C1 | | Reading slice (Binary) | | Factory setting / Light / Dark / Darker in dark | | | | |
| | 1 | | No. 1 | 0 / 1 / 0 / 1 | 0 | 0 | 0 | |
| | 2 | | No. 2 | 0 / 0 / 1 / 1 | 0 | 0 | 0 | |
| | | Reading slice (Half tone) | | Factory setting / Light / Dark / Darker in dark | | | | |
| | 3 | | No. 3 | 0 / 1 / 0 / 1 | 0 | 0 | 0 | |
| | 4 | | No. 4 | 0 / 0 / 1 / 1 | 0 | 0 | 0 | |
| | 5 | Line density selection | Fine | Standard | 0 | 0 | 0 | OPTION (H only) |
| | 6 | Reserved | | | 0 | 0 | 0 | |
| | 7 | MTF correction in half tone mode | No | Yes | 0 | 0 | 0 | |
| | 8 | Reserved | | | 0 | 0 | 0 | |
| SW I D1 | 1 | Number of rings for auto receive | Binary input<br>No. = 8 4 2 1<br>1 2 3 4<br>EX 0 0 1 0 | | 0 | 0 | 0 | OPTION |
| | 2 | | | | 0 | 0 | 0 | |
| | 3 | | | | 1 | 1 | 1 | |
| | 4 | | | | 0 | 0 | 0 | |
| | 5 | Automatic switching manual to auto receive mode | Reception after 5 rings | No reception | 0 | 0 | 0 | |
| | 6 | Reserved | | | 0 | 0 | 0 | |
| | | CI detect frequency | | As PTT / 11.5Hz / 13.0Hz / 20.0Hz | | | | |
| | 7 | | No. 7 | 0 / 0 / 1 / 1 | 0 | 0 | 0 | |
| | 8 | | No. 8 | 0 / 1 / 0 / 1 | 0 | 0 | 0 | |
| SW I D2 | 1 | Reserved | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | 0 | 0 | 0 | |
| | 5 | Caller ID function | Yes | No | 0 | 0 | 0 | OPTION |
| | 6 | Caller ID detect during CI off | All times | Only first | 1 | 0 | 1 | |
| | 7 | Reserved | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | 0 | 0 | 0 | |

| SW NO. | DATA NO. | ITEM | Switch setting and function | | | | | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | | | 0 | | | DE | H | IT | |
| SW I D3 | 1<br>2<br>3<br>4<br>5 | CI off detection timer (0-1550ms setting by 50ms step) | Binary input<br>No. = 16 8 4 2 1<br>1 2 3 4 5<br>EX 0 1 1 1 0 | | | | | | 0<br>1<br>1<br>1<br>0 | 0<br>1<br>1<br>1<br>0 | 0<br>1<br>1<br>1<br>0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I E1 | 1 | Automatic switching mode | TEL/FAX auto switch | | | Switch to FAX | | | 1 | 1 | 1 | |
| | 2<br>3 | Pseudo ringing time at TEL/FAX automatic switching mode | | 15sec | 60sec | 30sec | 1200sec | | | | | OPTION |
| | | | No. 2 | 0 | 0 | 1 | 1 | | 0 | 0 | 0 | |
| | | | No. 3 | 0 | 1 | 0 | 1 | | 0 | 0 | 0 | |
| | 4 | Number of CNG signal detection at the TEL/FAX automatic switching mode | Twice | | | Once | | | 1 | 1 | 1 | |
| | 5 | CNG detection when TEL/FAX mode | 3sec | | | 5sec | | | 0 | 0 | 0 | |
| | 6 | Pseudo ringer ON/OFF cycle | 1sec ON/4sec OFF | | | 1sec ON/2sec OFF | | | 1 | 0 | 1 | |
| | 7 | Post answer tone (TEL/FAX mode) | No | | | Yes | | | 1 | 1 | 1 | |
| | 8 | Type of post answer tone | LA-SI-DO tone | | | 800Hz single tone | | | 0 | 0 | 0 | |
| SW I E2 | 1<br>2<br>3<br>4 | Pseudo ringer sound volume | Binary input<br>No. = 8 4 2 1<br>1 2 3 4<br>EX 1 0 1 0 | | | | | | 1<br>0<br>1<br>0 | 1<br>0<br>1<br>0 | 1<br>0<br>1<br>0 | |
| | 5<br>6<br>7<br>8 | Post answer tone transmission level (0 to -15dBm setting by 1dBm step) | Binary input<br>No. = 8 4 2 1<br>5 6 7 8<br>EX 1 0 0 1 | | | | | | 1<br>0<br>0<br>1 | 1<br>0<br>0<br>1 | 1<br>0<br>0<br>1 | |
| SW I E3 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2<br>3 | Action select when DTMF "#" is received during Tel/Fax automatic. | | No Action | No Action | A.M. Remote Operation | Disconnect | | | | | |
| | | | No. 2 | 0 | 0 | 1 | 1 | | 1 | 1 | 1 | |
| | | | No. 3 | 0 | 1 | 0 | 1 | | 0 | 1 | 0 | |
| | 4 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |

| SW NO. | DATA NO. | ITEM | Switch setting and function | | | | | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | | | 0 | | | DE | H | IT | |
| SW I F1 | | DTMF detection time | | 50ms | 80ms | 100ms | 120ms | | | | | |
| | 1 | | No. 1 | 0 | 0 | 1 | 1 | | 0 | 0 | 0 | |
| | 2 | | No. 2 | 0 | 1 | 0 | 1 | | 0 | 0 | 0 | |
| | 3 | Protection of remote reception (5 ✕✕ ) detect | Yes | | | No | | | 0 | 0 | 0 | |
| | 4 | Remote reception with GE telephone | Compatible | | | Not compatible | | | 1 | 1 | 1 | |
| | 5 | Remote operation code figure by external TEL (0~9) | Binary input<br>No. = 8 4 2 1<br>5 6 7 8<br>EX 0 1 0 1 | | | | | | 0 | 0 | 0 | OPTION |
| | 6 | | | | | | | | 1 | 1 | 1 | |
| | 7 | | | | | | | | 0 | 0 | 0 | |
| | 8 | | | | | | | | 1 | 1 | 1 | |
| SW I F2 | 1 | CNG detection in STAND-BY mode | Yes | | | No | | | 1 | 1 | 1 | OPTION |
| | | Number of CNG detect (AM mode) | | 1pulse | 2pulses | 3pulses | 4pulses | | | | | |
| | 2 | | No. 2 | 0 | 0 | 1 | 1 | | 0 | 0 | 0 | |
| | 3 | | No. 3 | 0 | 1 | 0 | 1 | | 1 | 1 | 1 | |
| | | Number of CNG detect (STAND-BY mode) | | 1pulse | 2pulses | 3pulses | 4pulses | | | | | |
| | 4 | | No. 4 | 0 | 0 | 1 | 1 | | 0 | 0 | 0 | |
| | 5 | | No. 5 | 0 | 1 | 0 | 1 | | 1 | 1 | 1 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I G1 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I G2 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I G3 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Choice after quiet detect **(UX-BD80H/90H ONLY)** | Wait response for 3sec | | | Normal FAX RX | | | 0 | 1 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |

| SW NO. | DATA NO. | ITEM | Switch setting and function | | | | | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | | | 0 | | | DE | H | IT | |
| SW I H1 | | Busy tone detection ON/OFF time (Lower duration) **(UX-BD80H/90H ONLY)** | | 150ms | 200ms | 250ms | 350ms | | | | | |
| | 1 | | No. 1 | 0 | 0 | 1 | 1 | | 0 | 0 | 0 | |
| | 2 | | No. 2 | 0 | 1 | 0 | 1 | | 0 | 1 | 0 | |
| | | Busy tone detection ON/OFF time (Upper duration) **(UX-BD80H/90H ONLY)** | | 650ms | 900ms | 1500ms | 2700ms | | | | | |
| | 3 | | No. 3 | 0 | 0 | 1 | 1 | | 0 | 0 | 0 | |
| | 4 | | No. 4 | 0 | 1 | 0 | 1 | | 0 | 1 | 0 | |
| | 5 | Busy tone detect continuation sound detect during OGM | No | | | Yes | | | 1 | 0 | 1 | |
| | 6 | Busy tone detect continuation sound detect | No | | | Yes | | | 0 | 0 | 0 | |
| | 7 | Busy tone detect intermittent sound detect during OGM | No | | | Yes | | | 1 | 0 | 1 | |
| | 8 | Busy tone detect intermittent sound detect | No | | | Yes | | | 0 | 0 | 0 | |
| SW I H2 | | Busy tone detection pulse number | | 2pulse | 4pulse | 6pulse | 10pulse | | | | | |
| | 1 | | No. 1 | 0 | 0 | 1 | 1 | | 0 | 0 | 1 | |
| | 2 | | No. 2 | 0 | 1 | 0 | 1 | | 1 | 1 | 1 | |
| | 3 | FAX switching when A.M. full | Yes | | | No | | | 0 | 0 | 0 | OPTION |
| | 4 | Busy tone continuation sound detect frequency **(UX-BD80H/90H only)** | 320 Hz - 570 Hzz | | | 320 Hz - 460 H | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | AM OGM announce only mode | Yes | | | No | | | 0 | 0 | 0 | OPTION |
| | 8 | Busy tone continuous sound detect time | 5sec | | | 10sec | | | 1 | 1 | 1 | |
| SW I I1 | | ICM recording time | | 4min | 15sec | 30sec | 60sec | | | | | OPTION |
| | 1 | | No. 1 | 0 | 0 | 1 | 1 | | 0 | 0 | 0 | |
| | 2 | | No. 2 | 0 | 1 | 0 | 1 | | 0 | 0 | 0 | |
| | | A.M. quiet time 1 | | 2sec | 3sec | 4sec | 5sec | | | | | |
| | 3 | | No. 3 | 0 | 0 | 1 | 1 | | 0 | 0 | 0 | |
| | 4 | | No. 4 | 0 | 1 | 0 | 1 | | 0 | 0 | 0 | |
| | | A.M. quiet time 2 | | 0sec | 1sec | 2sec | 3sec | | | | | |
| | 5 | | No. 5 | 0 | 0 | 1 | 1 | | 1 | 1 | 1 | |
| | 6 | | No. 6 | 0 | 1 | 0 | 1 | | 0 | 0 | 0 | |
| | 7 | Key input buzzer on/off switch (Two wayOn recording mode) | On | | | Off | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I I2 | | A.M. quiet detect time | Binary input<br>No. = 16 8 4 2 1<br>1 2 3 4 5<br>EX 0 0 1 1 0 | | | | | | | | | |
| | 1 | | | | | | | | 0 | 0 | 0 | |
| | 2 | | | | | | | | 0 | 0 | 0 | |
| | 3 | | | | | | | | 1 | 1 | 1 | |
| | 4 | | | | | | | | 1 | 1 | 1 | |
| | 5 | | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I I3 | 1 | Reserved | | | | | | | 0 | 1 | 0 | |
| | 2 | Max OGM record time | 15sec | | | 60sec | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | | 1 | 1 | 1 | |
| | 4 | Toll saver | Disable | | | Enable | | | 0 | 0 | 0 | OPTION |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Transfer dial recall | No | | | Yes | | | 0 | 0 | 0 | |

| SW NO. | DATA NO. | ITEM | Switch setting and function | | | | | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | | | | | 0 | DE | H | IT | |
| SW I I4 | 1<br>2<br>3<br>4 | AGC maximum gain (line)(10 to -25dB) (1dBm step) | Binary input<br>No. = 8 4 2 1<br>1 2 3 4<br>EX 0 0 0 0 | | | | | | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | |
| | 5<br>6<br>7<br>8 | AGC maximum gain (mic)(10 to -25dB) (1dBm step) | Binary input<br>No. = 8 4 2 1<br>5 6 7 8<br>EX 0 0 0 0 | | | | | | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | |
| SW I I5 | 1<br>2<br>3<br>4 | AGC energy reference level access code (line)(-0 to -30dB) (2dBm step) | Binary input<br>No. = 8 4 2 1<br>1 2 3 4<br>EX 0 0 0 0 | | | | | | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | |
| | 5<br>6<br>7<br>8 | AGC energy reference level access code (mic)(-0 to -30dB) (2dBm step) | Binary input<br>No. = 8 4 2 1<br>5 6 7 8<br>EX 0 0 0 0 | | | | | | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | |
| SW I I6 | 1<br>2<br>3<br>4 | AGC gain adaptation threshold (line) | Binary input<br>No. = 8 4 2 1<br>1 2 3 4<br>EX 1 1 1 1 | | | | | | 1<br>1<br>1<br>1 | 1<br>1<br>1<br>1 | 1<br>1<br>1<br>1 | |
| | 5<br>6<br>7<br>8 | AGC gain adaptation threshold (mic) | Binary input<br>No. = 8 4 2 1<br>5 6 7 8<br>EX 1 1 1 1 | | | | | | 1<br>1<br>1<br>1 | 1<br>1<br>1<br>1 | 1<br>1<br>1<br>1 | |
| SW I I7 | 1<br>2 | AGC slew rate (line) | | Slow | Normal | Little fast | Fast | | | | | |
| | | | No. 1 | 0 | 0 | 1 | 1 | | 1 | 1 | 1 | |
| | | | No. 2 | 0 | 1 | 0 | 1 | | 1 | 1 | 1 | |
| | 3<br>4 | AGC slew rate (mic) | | Slow | Normal | Little fast | Fast | | | | | |
| | | | No. 3 | 0 | 0 | 1 | 1 | | 1 | 1 | 1 | |
| | | | No. 4 | 0 | 1 | 0 | 1 | | 1 | 1 | 1 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |

| SW NO. | DATA NO. | ITEM | Switch setting and function | | | | | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | | | 0 | | | DE | H | IT | |
| SW I J1 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 3 | Sender's phone number setting | Cannot change | | | Change allowed | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Summer time setting | No | | | Yes | | | 0 | 1 | 0 | |
| | | Ringer volume | | Off | Low | Middle | High | | | | | OPTION |
| | 7 | | No. 7 | 0 | 0 | 1 | 1 | | 1 | 1 | 1 | |
| | 8 | | No. 8 | 0 | 1 | 0 | 1 | | 0 | 0 | 0 | |
| SW I J2 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | | Speaker volume (5stages) | | Very low | Low | Middle | High | Very high | | | | OPTION |
| | 6 | | No. 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| | 7 | | No. 7 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | |
| | 8 | | No. 8 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | |
| SW I J3 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | | Communication results printout (Transaction report) | | E/T/M | Send only | Always | No print | Err only | | | | OPTION |
| | 2 | | No. 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | |
| | 3 | | No. 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | |
| | 4 | | No. 4 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | |
| | | OGM/ICM output level to speaker | Binary input<br>No. = 8 4 2 1<br>5 6 7 8<br>EX 0 1 0 0 | | | | | | | | | |
| | 5 | | | | | | | | 0 | 0 | 0 | |
| | 6 | | | | | | | | 1 | 1 | 1 | |
| | 7 | | | | | | | | 0 | 0 | 0 | |
| | 8 | | | | | | | | 0 | 0 | 0 | |
| SW I K1 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | | 0 | 0 | 0 | |
| | | OGM/ICM output level to line | Binary input<br>No. = 32 16 8 4 2 1<br>3 4 5 6 7 8<br>EX 0 0 0 1 0 1(DE/IT)<br>EX 0 0 0 0 0 1(H) | | | | | | | | | |
| | 3 | | | | | | | | 0 | 0 | 0 | |
| | 4 | | | | | | | | 0 | 0 | 0 | |
| | 5 | | | | | | | | 0 | 0 | 0 | |
| | 6 | | | | | | | | 1 | 0 | 1 | |
| | 7 | | | | | | | | 0 | 0 | 0 | |
| | 8 | | | | | | | | 1 | 1 | 1 | |
| SW I L1 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 5 | Cut off mode (COPY mode) | Yes | | | No | | | 1 | 1 | 1 | OPTION |
| | 6 | A4 paper enable | Enable | | | Disable | | | 1 | 1 | 1 | |
| | 7 | LEGAL & LETTER paper enable | Enable | | | Disable | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I L2 | | Paper set size | | | LETTER | LEGAL | A4 | | | | | |
| | 1 | | No. 1 | | 0 | 0 | 1 | | 1 | 1 | 1 | |
| | 2 | | No. 2 | | 0 | 1 | 0 | | 0 | 0 | 0 | |
| | 3 | Automatic reduce of receive | Auto | | | 100 % | | | 1 | 1 | 1 | OPTION |
| | 4 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |

| SW NO. | DATA NO. | ITEM | Switch setting and function | | | | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | | 0 | | | DE | H | IT | |
| SW I M1 | 1 | Reserved | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | 0 | 0 | 0 | |
| SW I M2 | 1<br>2<br>3<br>4 | V.24 speed | | No. 1 | No.2 | No. 3 | No. 4 | | | | |
| | | | V.24 300bps | 0 | 0 | 0 | 0 | | | | |
| | | | V.24 600bps | 0 | 0 | 0 | 1 | | | | |
| | | | V.24 1200bps | 0 | 0 | 1 | 0 | | | | |
| | | | V.24 2400bps | 0 | 0 | 1 | 1 | | | | |
| | | | V.24 4800bps | 0 | 1 | 0 | 0 | | | | |
| | | | V.24 9600bps | 0 | 1 | 0 | 1 | | | | |
| | | | V.24 19200bps | 0 | 1 | 1 | 0 | 0 | 0 | 0 | |
| | | | V.24 38400bps | 0 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | | V.24 57600bps | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | V.24 115200bps | 1 | 0 | 0 | 1 | 1 | 1 | 1 | |
| | 5 | Reserved | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | 0 | 0 | 0 | |
| SW I N1 | 1 | Reserved | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | 0 | 0 | 0 | |
| SW I N2 | 1 | Reserved | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | 0 | 0 | 0 | |
| SW I N3 | 1 | Reserved | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | 0 | 0 | 0 | |
| SW I O1 | 1<br>2<br>3<br>4<br>5 | T10min (For SMS) x 100msec | Binary input<br>No. = 16 8 4 2 1<br>1 2 3 4 5<br>EX 1 0 1 0 0 (DE)<br>1 1 0 0 1 (H)<br>0 1 0 1 0 (IT) | | | | | 1<br>0<br>1<br>0<br>0 | 1<br>1<br>0<br>0<br>1 | 0<br>1<br>0<br>1<br>0 | |
| | 6 | Reserved | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | 0 | 0 | 0 | |

| SW NO. | DATA NO. | ITEM | Switch setting and function | | | | | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | | | 0 | | | DE | H | IT | |
| SW I O2 | 1 | T10max (For SMS) x1000msec | Binary input<br>No. = 16 8 4 2 1<br>1 2 3 4 5<br>EX 1 0 1 0 0 (DE/IT)<br>0 1 0 1 0 (H) | | | | | | 1 | 0 | 1 | |
| | 2 | | | | | | | | 0 | 1 | 0 | |
| | 3 | | | | | | | | 1 | 0 | 1 | |
| | 4 | | | | | | | | 0 | 1 | 0 | |
| | 5 | | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I O3 | 1 | T11max (For SMS) x1000msec | Binary input<br>No. = 16 8 4 2 1<br>1 2 3 4 5<br>EX 0 0 1 0 0 (DE/IT)<br>0 1 0 1 0 (H) | | | | | | 0 | 0 | 0 | |
| | 2 | | | | | | | | 0 | 1 | 0 | |
| | 3 | | | | | | | | 1 | 0 | 1 | |
| | 4 | | | | | | | | 0 | 1 | 0 | |
| | 5 | | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I O4 | 1 | TX Level (For V.23) | Binary input<br>No. = 16 8 4 2 1<br>1 2 3 4 5<br>EX 0 1 0 1 1 | | | | | | 0 | 0 | 0 | |
| | 2 | | | | | | | | 1 | 1 | 1 | |
| | 3 | | | | | | | | 0 | 0 | 0 | |
| | 4 | | | | | | | | 1 | 1 | 1 | |
| | 5 | | | | | | | | 1 | 1 | 1 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I O5 | | Line equalizer (For V.23 TX) | | 7.2km | 7.2km | 0km | 0km | | | | | |
| | 1 | | No. 1 | 1 | 1 | 0 | 0 | | 0 | 0 | 0 | |
| | 2 | | No. 2 | 1 | 0 | 1 | 0 | | 0 | 0 | 0 | |
| | | Line equalizer (For V.23 RX) | | 7.2km | 7.2km | 0km | 0km | | | | | |
| | 3 | | No. 3 | 1 | 1 | 0 | 0 | | 1 | 0 | 0 | |
| | 4 | | No. 4 | 1 | 0 | 1 | 0 | | 1 | 0 | 0 | |
| | 5 | Stop bit (V.23 TX) | 2 Bit | | | 1 Bit | | | 0 | 0 | 0 | |
| | 6 | Stop bit (V.23 TX) | 2 Bit | | | 1 Bit | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I O6 | 1 | SMS function (ON, OFF) | On | | | Off | | | 1 | 1 | 1 | |
| | 2 | SMS carrier select (1st or 2nd) | SMS Carrier = 2nd. | | | SMS Carrie = 1st. | | | 0 | 0 | 0 | |
| | 3 | SMS center check | Yes | | | No | | | 1 | 1 | 1 | |
| | 4 | FAX to FAX communication | Yes | | | No | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 1 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |
| SW I P1 | 1 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | | | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | | | | | 0 | 0 | 0 | |

| SW NO. | DATA NO. | ITEM | Switch setting and function | | Initial setting | | | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 0 | DE | H | IT | |
| SW I P2 | 1 | Reserved | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | 1 | 1 | 1 | |
| | 3 | Reserved | | | 1 | 1 | 1 | |
| | 4 | Reserved | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | 1 | 1 | 1 | |
| | 6 | Reserved | | | 1 | 1 | 1 | |
| | 7 | Reserved | | | 1 | 1 | 1 | |
| | 8 | Reserved | | | 1 | 1 | 1 | |
| SW I P3 | 1 | Reserved | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | 0 | 0 | 0 | |
| SW I P4 | 1 | Reserved | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | 0 | 0 | 0 | |
| SW I P5 | 1 | Reserved | | | 0 | 0 | 0 | |
| | 2 | Reserved | | | 0 | 0 | 0 | |
| | 3 | Reserved | | | 0 | 0 | 0 | |
| | 4 | Reserved | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | 0 | 0 | 0 | |
| SW I P6 | 1 | Ink save mode | Yes | No | 1 | 1 | 1 | OPTION |
| | 2 | Half tone copy ink save mode printing fixed | Yes | No | 1 | 1 | 1 | |
| | 3 | Reserved | | | 1 | 1 | 1 | |
| | 4 | Reserved | | | 0 | 0 | 0 | |
| | 5 | Reserved | | | 0 | 0 | 0 | |
| | 6 | Reserved | | | 0 | 0 | 0 | |
| | 7 | Reserved | | | 0 | 0 | 0 | |
| | 8 | Reserved | | | 0 | 0 | 0 | |
| SW I P7 | 1<br>2<br>3 | OGM/ICM output level to Remote Handset | Binary input<br>No. = 4 2 1<br>1 2 3<br>EX 0 0 0 | | 0<br>0<br>0 | 0<br>0<br>0 | 0<br>0<br>0 | |
| | 4<br>5 | Length select for Communication-End beep | 3sec / 1sec / No beep<br>No. 4: 0 / 0 / 1<br>No. 5: 0 / 1 / 0 | | 0<br>0 | 0<br>0 | 0<br>0 | |
| | 6 | Turn OFF/ON the key error/Com. error etc. | No error beep | Beep the error tone | 0 | 0 | 0 | OPTION |
| | 7 | Turn OFF/ON for normal end (3sec) beep | No normal end beep | Beep the normal end tone | 0 | 0 | 0 | OPTION |
| | 8 | Turn OFF/ON for key buzzer | No beep | Beep the key touch tone | 0 | 0 | 0 | OPTION |

## 8.2. Soft switch function description

**SW-A1 No. 1 Protect from echo**

Used to protect from echo in reception.

**SW-A1 No. 2 Forced 4800BPS reception**

When line conditions warrant that receptions take place at 4800 BPS repeatedly.

It may improve the success of receptions by setting at 4800BPS.

This improves the receiving document quality and reduces handshake time due to fallback during training.

**SW-A1 No. 3 Footer print**

When set to "1", the date of reception, the sender machine No., and the page No. are automatically recorded at the end of reception.

**SW-A1 No. 4 Length limitation of copy/send/receive**

Used to set the maximum page length.

To avoid possible paper jam, the page length is normally limited to 0.6 meter for copy or transmit, and 1 meters for receive.

It is possible to set it to "No limit" to transmit a long document, such as a computer print form, etc. (In this case, the receiver must also be set to no limit.)

**SW-A1 No. 5 CSI transmission**

(CSI TRANSMISSION) is a switch to set whether the machine sends or does not send the signal (CSI signal) informing its own telephone No. to the remote fax machine when information is received. When "nonsending" is set, the telephone No. is not output on the remote transmitting machine if the remote transmitting machine has the function to display or print the telephone No. of receiving machine, using this CSI signal.

**SW-A1 No. 6 DIS receive acknowledgment during G3 transmission**

Used to make a choice of whether reception of DIS (NSF) is acknowledged after receiving two DISs (NSFs) or receiving one DIS (two NSFs).

It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

**SW-A1 No. 7 Non-modulated carrier for V.29 transmission mode**

Though transmission of a non-modulated carrier is not required for transmission by the V.29 mode according to the CCITT recommendation, it may be permitted to a send non-modulated carrier before the image signal to avoid an echo suppression problem. It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

**SW-A1 No. 8 EOL (End Of Line) detect timer**

Used to make a choice of whether to use the 25-second or 13-second timer for detection of EOL.

This is effective to override communication failures with some facsimile models that have longer EOL detection.

**SW-A2 No. 1 ~ No. 4 Modem speed**

Used to set the initial modem speed. The default is 14400BPS.

It may be necessary to program it to a slower speed when frequent line fallback is encountered, in order to save the time required for fallback procedure.

**SW-A2 No. 5 Sender's information transmit**

(SENDER'S INFORMATION TRANSMISSION) is a switch to set the function to print the content of HEADER PRINT described in the passcode list at the front end of receiver's original when original is sent to the remote machine.

If this switch is set to "NO", the HEADER PRINT is not output at the receiving machine.

**SW-A2 No. 6 Reserved**

Set to "0".

**SW-A2 No. 7 Communication error treatment in RTN sending mode (Reception)**

Used to determine communication error treatment when RTN is sent by occurrence of a received image error in G3 reception. When it is set to "1", communication error is judged as no error.

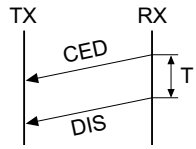
**SW-A2 No. 8 CNG transmission**

When set to "0" , this model allows CNG transmission by pressing the Start key in the key pad dialing mode. When set to "1", CNG transmission in the key pad dialing mode cannot be performed. In either case. CNG transmission can be performed in the auto dial mode.

**SW-A3 No. 1, No. 2 CED tone signal interval**

For international communication, the 2100Hz CED tone may act as an echo suppression switch, causing a communication problem.

Though SW-A3 No. 1 and No. 2 are normally set to 0, this setting is used to change the time between the CED tone signal to eliminate the communication caused by echo.




**SW-A3 No. 3 MR Coding**

MR Coding is enable.

**SW-A3 No. 4 ECM mode**

Used to determine ECM mode function. Refer to following table.

(Depending on remote machine)

| | | | | | |
|---|---|---|---|---|---|
| SW-A3 No. 4 ECM MODE | | 0 | 0 | 1 | 1 |
| SW-A3 No. 5ECM MMR MODE | | 0 | 1 | 0 | 1 |
| Compression method | ECM MMR mode | Yes | No | No | No |
| | ECM MH mode | Yes | Yes | No | No |
| | MR mode | Yes | Yes | Yes | Yes |

**SW-A3 No. 5 ECM MMR**

See SW-A3 No. 4.

**SW-A3 No. 6 ~ No. 8 Reserved**

Set to "0".

**SW-A4 No. 1 ~ No. 5 Signal transmission level**

Used to control the signal transmission level in the range of-0dB to-31dB.

**SW-A4 No. 6 Protocol monitor (Error print)**

If set to "1", protocol is printed at communication error.

**SW-A4 No. 7 Protocol monitor**

Normally set to "0". If set to "1", communication can be checked, in case of trouble, without using a G3 tester or other tools.

When communication FSK data transmission or reception is made, the data is taken into the buffer. When communication is finished, the data is analyzed and printed out. When data is received with the line monitor (SW-A4 No. 8) set to "1" the reception level is also printed out.

**SW-A4 No. 8 Line monitor**

Normally set to "0". If set to "1", the transmission speed and the reception level are displayed on the LCD. Used for line tests.

**SW-A5 No. 1, No. 2 Digital line equalization setting (Reception)**

Line equalization when reception is to be set according to the line characteristics.

Setting should be made according to distance between the telephone and the telephone company central switching station.

**SW-A5 No. 3, No. 4 Digital line equalization setting (Transmission)**

Line equalization when transmitter is to be set according to the line characteristics.

Setting should be made according to distance between the telephone and the telephone company central switching station.

**SW-A5 No. 5, No. 6 Digital cable equalizer setting (Reception for Caller ID)**

Line equalization when reception for CALLER ID is to be set according to the line characteristics.

Setting should be made according to distance between the telephone and the telephone company central switching station.

**SW-A5 No. 7 Error criterion**

Used to select error criterion for sending back RTN when receiving image data.

**SW-A5 No. 8 Anti junk fax check**

When using the Anti junk fax function, set to "1".

**SW-A6 No. 1, No. 2 Reserved**

Set to "0".

**SW-A6 No. 3 Disconnect the line when DIS is received in RX mode**

Bit1= 0: When DIS signal is received during RX mode, the line is disconnected immediately.

Bit1= 1: When DIS signal is received during RX mode, the line is disconnected on the next tone.

**SW-A6 No. 4 Equalizer freeze control (MODEM)**

This switch is used to perform reception operation by fixing the equalizer control of modem for the line which is always in an unfavorable state and picture cannot be received.

* Usually, the control is executed according to the state of line where the equalizer setting is changed always.

**SW-A6 No. 5 Equalizer freeze control 7200BPS only**

Setting which specifies SW-A3 No. 6 control only in the condition of 7200BPS modem speed.

**SW-A6 No. 6 CNG transmission in manual TX mode**

When set to "1", fax transmit the CNG signal in case of manual transmission mode (User press the START key after waiting for the fax answering signal from handset or speaker).

**SW-A6 No. 7 Reserved**

Set to "0".

**SW-A6 No. 8 Modem speed automatic fallback when RX level is under -40dBm**

When set to "1", if fax signal level is under -40dBm during reception, machine selects the slower modem speed automatically.

It is effective when noises occur on the received document due to the long distance communications.

**SW-B1 No. 1 ~ No. 4 Recall interval**

Choice is made for a redial interval for speed and rapid dial calls.

Use a binary number to program this. If set to 0 accidentally, 1 will be assumed.

**SW-B1 No. 5 ~ No. 8 Recall times**

Choice is made as to how many redials there should be.

**SW-B2 No. 1 Dialing pause (sec/pause)**

Pauses can be inserted between telephone numbers of direct dial connection. Selection of 4 sec or 2 sec pause is available.

**SW-B2 No. 2 Dial tone detection (before auto dial)**

Used to set YES/NO of dial tone detection in auto dialing.

**SW-B2 No. 3 Reserved**

Set to "0".

**SW-B2 No. 4 Busy tone detection (after auto dial)**

Used to set busy tone detection in auto dialing.

**SW-B2 No. 5, No. 6 Waiting time after dialing**

This is time waiting for the opponent's signals after dialing.

**SW-B2 No. 7, No. 8 Reserved**

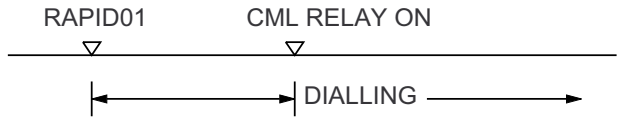
Set to "0".

**SW-B3 No. 1 ~ No. 5 Reserved**

Set to "0".

**SW-B3 No. 6, No. 7 Auto dial mode Delay timer of before line connect**

Delay time between the dial key input and line connection under the auto dial mode.




| No.6 | No.7 | |
|---|---|---|
| 0 | 0 | 0sec |
| 0 | 1 | 1.5sec |
| 1 | 0 | 3.0sec |
| 1 | 1 | 4.5sec |

**SW-B3 No. 8 Hold key**

Used to set YES/NO of holding function by the Hold key.

**SW-B4 No. 1, No. 2 Auto dial mode Delay timer of after line connect**

Delay time between the line connection and dial data output under the auto dial mode.

| No.1 | No.2 | |
|---|---|---|
| 0 | 0 | 1.7sec |
| 0 | 1 | 3.0sec |
| 1 | 0 | 3.6sec |
| 1 | 1 | 4.0sec |

**SW-B4 No. 3 Dial mode**

When using the pulse dial, set to 1. When using the tone dial, set to 0.

**SW-B4 No. 4 Pulse → Tone change function by ✳ key**

When setting to 1, the mode is changed by pressing the ✳ key from the pulse dial mode to the tone dial mode.

**SW-B4 No. 5 Dial pulse make/break ratio (%)**

When using the 33% make ratio pulse dial, set to "0".

When using the 40% make ratio pulse dial, set to "1".

**SW-B4 No. 6, No. 7 Reserved**

Set to "0".

**SW-B4 No. 8 Recalling fixed only one time when dialing was unsuccessful without detecting busy tone signal**

When dialing results in failure since the busy tone cannot be detected, recalling is fixed to one time.

Supplementary explanation

If time-out termination is made when dialing, only single recall is possible even if the setting time of recalls (SW-B1 No. 5 - No. 8) has been set to some times. This soft switch is added in order to meet FCC.

**SW-B5 No. 1 ~ No. 5 DTMF signal transmission level (Low)**

The dial signal of a push button telephone is called DTMF (dual-tone multi-frequency). These tones consist of two signals, one from a high group of frequencies and one from a low group of frequencies. Represent each of the push button telephone characters shown as below.

| Low Frequency | High Frequency | | |
|---|---|---|---|
| | 1209Hz | 1336Hz | 1477Hz |
| 697Hz | 1 | 2 | 3 |
| 770Hz | 4 | 5 | 6 |
| 852Hz | 7 | 8 | 9 |
| 941Hz | * | 0 | # |

The transmission level of DTMF signal is adjusted. (lower frequency)

00000: 0dBm

↓

11111: -15.5 dBm (-0.5dBm x 31)

**SW-B5 No. 6 Dial pulse format**

If this switch is set to “1”, pulse dial number dials +1.

(Example)

0: dial 1

9: dial 0 (10 pulses)

**SW-B5 No. 7 FLASH send time**

Used to select length of Flash.

No. 7=0: 90msec (Short time)

No. 7=1: 250msec (Long time)

**SW-B5 No. 8 Reserved**

Set to "0".

**SW-B6 No. 1 ~ No. 5 DTMF signal transmission level (High)**

The transmission level of DTMF signal is adjusted. (higher frequency)

00000: 0dBm

↓

11111: -15.5 dBm (-0.5dBm x 31)

**SW-B6 No. 6 ~ No. 8 Reserved**

Set to "0".

**SW-C1 No. 1, No. 2 Reading slice (Binary)**

Used to determine the set value of reading density in standard/fine mode. The standard setting is "00" (Factory setting is "00")

**SW-C1 No. 3, No. 4 Reading slice (Half tone)**

Used to determine the set value of reading density in half tone mode.

The standard setting is "00" (Factory setting is "00")

**SW-C1 No. 5 Line density selection**

Used to set the transmission mode which is automatically selected when the Resolution key is not pressed. In the copy mode, however, the fine mode is automatically selected unless the Resolution key is manually set to another mode.

**SW-C1 No. 6 Reserved**

Set to "0".

**SW-C1 No. 7 MTF correction in half tone mode**

This allows selection of MTF correction (dimness correction) in the half tone mode.

When "NO" (=1) is selected, the whole image becomes soft and mild.

Clearness of characters will be reduced. Normally set to "YES" (=0).

**SW-C1 No. 8 Reserved**

Set to "0".

**SW-D1 No. 1 ~ No. 4 Number of rings for auto receive**

When the machine is set in the auto receive mode, the number of rings before answering can be selected. It may be set from one to four rings using a binary number. Since the facsimile telephone could be used as an ordinary telephone if the handset is taken off the hook, it should be programmed to the user’s choice. If the soft switch was set to 1, direct connection is made to the facsimile. If a facsimile calling beep was heard when the handset is taken off the hook, press the START key and put the handset on the hook to have the facsimile start receiving. If it was set to 0 accidentally, receive ring is set to 1.

NOTE: If the machine is set to answer after a large number of rings, it may not be able to receive faxes successfully. If you have difficulty receiving faxes, reduce the number of rings to a maximum of 6.

**SW-D1 No. 5 Automatic switching manual to auto receive mode**

This soft switch is used to select whether the machine should switch to the auto receive mode after 5 rings in the manual receive mode or remain in the same way as SW-D1 No. 1, No. 2, No. 3 and No. 4 "0"0"1"0"(5 rings).

**SW-D1 No. 6 Reserved**

Set to "0".

**SW-D1 No. 7, No. 8 CI detect frequency**

Detection frequency of ring signal for auto reception is set.
When set to No. 6=0, No. 7=0, frequency is set to PTT recommendation.
When set to No. 6=0, No. 7=1, frequency is set to 11.5Hz or more.
When set to No. 6=1, No. 7=0, frequency is set to 13.0Hz or more.
When set to No. 6=1, No. 7=1, frequency is set to 20.0Hz or more.

**SW-D2 No. 1 ~ No. 4 Reserved**

Set to "0".

**SW-D2 No. 5 Caller ID function**

Used for Caller ID function.

**SW-D2 No. 6 Caller ID detect during CI off**

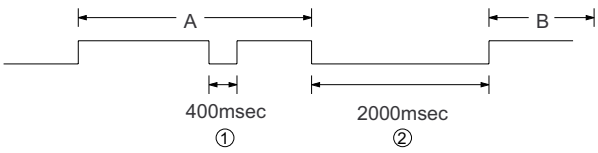
Detection of caller ID signal is performed as follows:
0:First CI OFF only
1:All of CI OFF

**SW-D2 No. 7, No. 8 Reserved**

Set to "0".

**SW-D3 No. 1 ~ No. 5 CI off detection timer (0-1550ms setting by 50ms step)**

Set the minimum time period of CI signal interruption which affords to be judged as a CI OFF section with 50ms steps.
(Example).




01110 (50ms ~ 14):

700ms (CI interruption>700ms:Judged as a CI OFF section)
The section 1 is not judged as a CI OFF section, the CI signal A is counted as one signal.
The section 2 is judged as a CI OFF section, the CI signal B is considered as the second signal.

00111 (50ms ~ 7):

350ms (CI interruption>350ms:Judged as a CI OFF section)
The section 1 is judged as a CI OFF section, and the CI signal A is counted as two signals.
The section 2 is judged as a CI OFF section, and the CI signal B is considered as the third signal.

**SW-D3 No. 6 ~ No. 8 Reserved**

Set to "0".

**SW-E1 No. 1 Automatic switching mode**

Used to set auto TEL/FAX switching mode or to set the normal fax mode.

**SW-E1 No. 2, No. 3 Pseudo ringing time at the TEL/FAX automatic switching mode**

Choice is made as to how long to rumble the dummy ringer on TEL/FAX automatic switching mode.

**SW-E1 No. 4 Number of CNG signal detection at the TEL/FAX automatic switching mode**

Used for detection of CNG in one or two tones in the TEL/FAX automatic switching mode.

**SW-E1 No. 5 CNG detection when TEL/FAX mode**

The switch which sets the time from the start of CNG detection to the end of detection.

**SW-E1 No. 6 Pseudo ringer ON/OFF cycle**

When set to “0”, pseudo ringer is 1sec ON and 2sec OFF cycles.

When set to “1”, pseudo ringer is 1sec ON and 4sec OFF cycles.

**SW-E1 No. 7 Post answer tone (TEL/FAX mode)**

When set to “0”, machine send the tones in TEL/FAX auto changeover mode.

**SW-E1 No. 8 Type of post answer tone**

When set to “0”, post answer tone is 800Hz single tone.

When set to “1”, post answer tone is 880Hz/988Hz/1046Hz (LA-SI-DO) tone.

**SW-E2 No. 1 ~ No. 4 Pseudo ringer sound volume**

Used to adjust the sound volume of pseudo ringer to the line (ring back tone) generated on selecting TEL/FAX.

**SW-E2 No. 5 ~ No. 8 Post answer tone transmission level (0 to -15dBm setting by 1dBm step)**

Used to adjust the sound volume of post answer tone to the line generated on selecting TEL/FAX.

**SW-E3 No. 1 Reserved**

Set to "0".

**SW-E3 No. 2, No.3 Action select when DTMF "#" is received during tel/fax automatic switching mode**

When set to No. 2-1, No. 3-1, if machine detects the DTMF code # during tel/fax automatic switching mode, stop the pseudo ringer and disconnect the line. This effect when operator wants to stop the pseudo ringer from extension phone connected with parallel.

**SW-E3 No. 4 ~ No. 8 Reserved**

Set to "0".

**SW-F1 No. 1, No. 2 DTMF detect time**

Used to set detect time of DTMF (Dual Tone Multi Frequency) used in remote reception (5 ⋇ ).
The longer the detect time is, the less the error detection is caused by noises.

**SW-F1 No. 3 Protection of remote reception (5 ⋇ ) detect**

Used to set the function of remote reception (5 ⋇ ). When set to "1", the remote reception function is disabled.

**SW-F1 No. 4 Remote reception with GE telephone**

(Corresponding to TEL mode by GE) P. B. X.

"1": Compatible with TEL mode by GE

"0": Not compatible

- When sending (5 ⋇ ) for remote reception with a GE manufactured telephone remote reception may not take place because of special specifications in their DTMF. To overcome this, a soft SW is provided to change the modem setting to allow for remote reception.
- If this soft SW is set to "1", other telephone sets may be adversely affected.

**SW-F1 No. 5 ~ No. 8 Remote operation code figure by external TEL (0 ~ 9)**

Remote operation codes can be changed from 0 through 9. If set to greater than 9, it defaults to 9. The "5 ⋇ " is not changed.
Ex-7 ⋇ (Default: 5 ⋇ )

**SW-F2 No. 1 CNG detection in STAND-BY mode**

When setting to "1", the CNG signal detection function during stand-by stops.

**SW-F2 No. 2, No. 3 Number of CNG detect (AM mode)**

Used for detection of CNG in 1 to 4 pulses.

**SW-F2 No. 4, No. 5 Number of CNG detect (STAND-BY mode)**

Used for detection of CNG in 1 to 4 pulses.

**SW-F2 No. 6 ~ No. 8 Reserved**

Set to "0".

**SW-G1 No. 1 ~ No. 8 Reserved**

Set to "0".

**SW-G2 No. 1 ~ No. 8 Reserved**

Set to "0".

**SW-G3 No. 1 ~ No. 6 Reserved**

Set to "0".

**SW-G3 No. 7 Choice after quiet detect (UX-BD80H/90H ONLY)**

"0": The reception begins when no sound is detected in A.M. mode.

"1": The DIS signal is transmitted only once when no sound is detected in A.M. mode.

**SW-G3 No. 8 Reserved**

Set to "0".

**SW-H1 No. 1, No. 2 Busy tone detection ON/OFF time (Lower duration) (UX-BD80H/90H ONLY)**

The initial value of detection is set according to electric condition.

The set value is changed according to the local switch board. (Erroneous detection of sound is reduced).

Normally the upper limit is set to 900msec, and the lower limit to 200msec.

If erroneous detection is caused by sound, etc., adjust the detection-range.

**SW-H1 No. 3, No. 4 Busy tone detection ON/OFF time (Upper duration) (UX-BD80H/90H ONLY)**

Similarly to SW-H1 No. 1, the set value can be varied.

The upper limit can be set in the range of 650msec to 2700msec.

| SW-H1 No. 1 | SW-H1 No. 2 | SW-H1 No. 3 | SW-H1 No. 4 | Detection range |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 150msec ~ 650msec |
| 0 | 0 | 0 | 1 | 150msec ~ 900msec |
| 0 | 0 | 1 | 0 | 150msec ~ 1500msec |
| 0 | 0 | 1 | 1 | 150msec ~ 2700msec |
| 0 | 1 | 0 | 0 | 200msec ~ 650msec |
| 0 | 1 | 0 | 1 | 200msec ~ 900msec |
| 0 | 1 | 1 | 0 | 200msec ~ 1500msec |
| 0 | 1 | 1 | 1 | 200msec ~ 2700msec |
| 1 | 0 | 0 | 0 | 250msec ~ 650msec |
| 1 | 0 | 0 | 1 | 250msec ~ 900msec |
| 1 | 0 | 1 | 0 | 250msec ~ 1500msec |
| 1 | 0 | 1 | 1 | 250msec ~ 2700msec |
| 1 | 1 | 0 | 0 | 350msec ~ 650msec |
| 1 | 1 | 0 | 1 | 350msec ~ 900msec |
| 1 | 1 | 1 | 0 | 350msec ~ 1500msec |
| 1 | 1 | 1 | 1 | 350msec ~ 2700msec |

**SW-H1 No. 5 Busy tone detect continuation sound detect during OGM**

Used to detect the continuous tone of specific frequency during OGM output.

**SW-H1 No. 6 Busy tone detect continuation sound detect**

Used to select detection of the continuous sound of certain frequency.

**SW-H1 No. 7 Busy tone detect intermittent sound detect during OGM**

Used to detect the intermittent tone of specific frequency during OGM output.

**SW-H1 No. 8 Busy tone detect intermittent sound detect**

Used to select detection of the intermittent sound of certain frequency.

**SW-H2 No. 1, No. 2 Busy tone detection pulse number**

Used to set detection of busy tone intermittent sounds.

**SW-H2 No. 3 FAX switching when A.M. full**

If the answering machine's memory (tape) is full and there is no response, the machine automatically switches to FAX reception.

**SW-H2 No. 4 Busy tone continuation sound detect frequency (UX-BD80H/90H only)**

Set detecting frequency of busy tone continuation sound for 320 - 570 Hz of 320 - 460 Hz.

**SW-H2 No. 5, No. 6 Reserved**

Set to "0".

**SW-H2 No. 7 AM OGM announce only mode**

If this switch is set to 1, the machine will not record ICM.

(disconnect the line after OGM output)

**SW-H2 No. 8 Busy tone continuos sound detect time**

Set detecting time busy tone continuous sound for 5 or 10 seconds.

**SW-I1 No. 1, No. 2 ICM recording time**

Used to select the incoming message recording time to 15sec/30sec/60sec/4min.

**SW-I1 No. 3, No. 4 A.M. quiet time 1**

Used to select four kinds of no sound time (2 sec ~ 5 sec) after reception in the T.A.D. mode until OGM is output.

**SW-I1 No. 5, No. 6 A.M. quiet time 2**

Used to select four kinds of no sound time (0 sec ~ 3 sec) after OGM output the T.A.D. mode until ICM recording is started.

**SW-I1 No. 7 Key input buzzer on/off switch (Two way recording mode)**

Used to turn ON/OFF key input buzzer in the TWO-WAY recording mode.

**SW-I1 No. 8 Reserved**

Set to "0".

**SW-I2 No. 1 ~ No. 5 A.M. quiet detect time**

Used to set no sound time (0 sec ~ 32 sec) during the T.A.D. mode operation.

**SW-I2 No. 6 ~ No. 8 Reserved**

Set to "0".

**SW-I3 No. 1 Reserved (UX-BD80DE/90DE/80IT)**

Set to "0".

**SW-I3 No. 1 Reserved (UX-BD80H/90H)**

Set to "1".

**SW-I3 No. 2 Max OGM record time**

Used select the outgoing message recording time to 60sec or 15sec.

**SW-I3 No. 3 Reserved**

Set to "0".

**SW-I3 No. 4 Toll saver**

Used to turn on the toll saver function. If it is off, the reception frequency in the AM mode is indentical with that in the FAX mode.

**SW-I3 No. 5 ~ No. 7 Reserved**

Set to "0".

**SW-I3 No. 8 Transfer dial recall**

If this switch is set to "1", machine disables redial in Transfer function.

**SW-I4 No. 1 ~ No. 4 AGC maximum gain (Line) (10 ~ 25dB) (1dB step)**

The AGC Maximum Gain limits the gain applied by the AGC. Messages with average energy below the AGC Energy Reference Level will have their average energy level increased by no more than the AGC Maximum Gain. The AGC Maximum Gain should average energy of the message with the lowest average energy to the AGC Energy Reference Level.

**SW-I4 No. 5 ~ No. 8 AGC maximum gain (Mic) (10 ~ 25dB) (1dB step)**

The AGC Maximum Gain limits the gain applied by the AGC. Messages with average energy below the AGC Energy Reference Level will have their average energy level increased by no more than the AGC Maximum Gain. The AGC Maximum Gain should average energy of the message with the lowest average energy to the AGC Energy Reference Level.

**SW-I5 No. 1 ~ No. 4 AGC energy reference level access code (Line) (-0 ~ -30dB) (2dB step)**

The AGC Energy Reference Level controls the playback level. Any message having average speech energy above the energy reference level has its playback level attenuated, and any level has its playback level increased. If the playback level is too high (low), then decreasing (increasing) the AGC Energy Reference Level will achieve the desired level.

**SW-I5 No. 5 ~ No. 8 AGC energy reference level access code (Mic) (-0 ~ -30dB) (2dB step)**

The AGC Energy Reference Level controls the playback level. Any message having average speech energy above the energy reference level has its playback level attenuated, and any level has its playback level increased. If the playback level is too high (low), then decreasing (increasing) the AGC Energy Reference Level will achieve the desired level.

**SW-I6 No. 1 ~ No. 4 AGC gain adaptation threshold (Line)**

The AGC adjusts the amount of gain applied to the incoming message only when the average energy exceeds the AGC Gain Adaptation Threshold. The AGC Gain Adaptation Threshold prevents message background noise from corrupting the gain provided that the AGC Gain Adaptation Threshold is greater than the background noise energy. In the event that a message has background noise energy greater than the AGC Gain Adaptation Threshold, the AGC Gain can be no greater than the AGC Maximum Gain. Note that the AGC Gain Adaptation Threshold must always be greater than the RPACS VOX Turn-On Threshold.

**SW-I6 No. 5 ~ No. 8 AGC gain adaptation threshold (Mic)**

The AGC adjusts the amount of gain applied to the incoming message only when the average energy exceeds the AGC Gain Adaptation Threshold. The AGC Gain Adaptation Threshold prevents message background noise from corrupting the gain provided that the AGC Gain Adaptation Threshold is greater than the background noise energy. In the event that a message has background noise energy greater than the AGC Gain Adaptation Threshold, the AGC Gain can be no greater than the AGC Maximum Gain. Note that the AGC Gain Adaptation Threshold must always be greater than the RPACS VOX Turn-On Threshold.

**SW-I7 No. 1, No. 2 AGC slew rate (Line)**

The AGC Slew Rate controls the convergence of the message playback level to the desired playback level. A large slew rate will allow faster convergence and a small slew rate will allow slower convergence.

**SW-I7 No. 3, No. 4 AGC slew rate (Mic)**

The AGC Slew Rate controls the convergence of the message playback level to the desired playback level. A large slew rate will allow faster convergence and a small slew rate will allow slower convergence.

**SW-I7 No. 5 ~ No. 8 Reserved**

Set to "0".

**SW-J1 No. 1, No. 2 Reserved**

Set to "0".

**SW-J1 No. 3 Sender's phone number setting**

Used to make a choice of whether the registered sender's phone number can be changed or not. If the switch is set to "1", new registration of the sender's phone number is disabled to prevent accidental wrong input.

**SW-J1 No. 4, No. 5 Reserved**

Set to "0".

**SW-J1 No. 6 Summer time setting**

This is used to set YES/NO of automatic clock adjustment for European Summer time.

**SW-J1 No. 7, No. 8 Ringer volume**

Used to adjust ringing volume.

**SW-J2 No. 1 ~ No. 5 Reserved**

Set to "0".

**SW-J2 No. 6 ~ No. 8 Speaker volume (5 stages)**

Used to adjust sound volume from a speaker.

**SW-J3 No. 1 Reserved**

Set to "0".

**SW-J3 No. 2 ~ No. 4 Communication result printout (Transaction report)**

Every communication, the result can be output. As usual, it is set to print the timer sending communication error alone. If No. 2: 0 No. 3: 1 No. 4: 0 are set, printing is always on (printed even if it is normally ended).

000: Error, timer and memory sending/receiving

001: Sending

010: Continuous printing

011: Not printed

100: Communication error

**SW-J3 No. 5 ~ No. 8 OGM/ICM output level to speaker (0dB ~ -15dB) (1dB step)**

Used to control OGM and ICM output level to speaker.

**SW-K1 No. 1, No. 2 Reserved**

Set to "0".

**SW-K1 No. 3 ~ No. 8 OGM/ICM output level to Line**

Used to control OGM and ICM output level to Line.

**SW-L1 No. 1 ~ No. 4 Reserved**

Set to "0".

**SW-L1 No. 5 Cut off mode (COPY mode)**

Whether the excessive part is printed on the next recording paper or discarded is selected to copy a document which is longer than the recording paper.

**SW-L1 No. 6 A4 Paper enable**

The use of recording paper of A4 is enabled.

**SW-L1 No. 7 LEGAL and LETTER paper enable**

The use of recording paper of LEGAL and LETTER is enabled.

**SW-L1 No. 8 Reserved**

Set to "0".

**SW-L2 No. 1, No.2 Paper set size**

At present size of the recording paper.

**SW-L2 No. 3 Automatic reduce of receive**

If set to 1, it is reduced automatically when receiving.

**SW-L2 No. 4 ~ No. 8 Reserved**

Set to "0".

**SW-M1 No. 1 ~ No. 8 Reserved**

Set to "0".

**SW-M2 No. 1 ~ No. 4 V.24 Speed**

Speed setting of the serial communication between Cordless PWB and DECT Cordless Handset PWB. If this and DECT Cordless Handset PWB's speed is different, DECT Cordless Handset can not work correctly. Please don't change except the case DECT Cordless Handset PWB's speed is changed.

Default: 9600bps

**SW-M2 No. 5 ~ No. 8 Reserved**

Set to "0".

**SW-N1 No. 1 ~ No. 8 Reserved**

Set to "0".

**SW-N2 No. 1 ~ No. 8 Reserved**

Set to "0".

**SW-N3 No. 1 ~ No. 8 Reserved**

Set to "0".

**SW-O1 No. 1 ~ No. 5 T10min (For SMS) x 100msec**

This is the delay value before sending DLL SMS SET signal, when SMS RX. This value x 100 ms.

**SW-O1 No. 6 ~ No. 8 Reserved**

Set to "0".

**SW-O2 No. 1 ~ No. 5 T10max (For SMS) x 1000msec**

This is the maximum time waiting for DLL SMS SET signal, when SMS TX. This value x 1000 ms.

**SW-O2 No. 6 ~ No. 8 Reserved**

Set to "0".

**SW-O3 No. 1 ~ No. 5 T11max (For SMS) x 1000msec**

This is the maximum time waiting for the response between signals. This value x 1000 ms.

**SW-O3 No. 6 ~ No. 8 Reserved**

Set to "0".

**SW-O4 No. 1 ~ No. 5 TX Level (For V.23)**

Used to SMS protocol signal (V.23) transmission level in the range of 0 dB to -31 dB.

**SW-O4 No. 6 ~ No. 8 Reserved**

Set to "0".

**SW-O5 No. 1, No. 2 Line equalizer (For V.23 TX)**

Line equalization when SMS protocol signal (V.23) sending. Setting should be made according to distance between the telephone and telephone company central station.

**SW-O5 No. 3, No. 4 Line equalizer (For V.23 RX)**

Line equalization when SMS protocol signal (V.23) receiving. Setting should be made according to distance between the telephone and telephone company central station.

**SW-O5 No. 5 Stop bit (V.23 TX)**

Number of stop bit of SMS protocol signals setting on sending signal. 1 Bit or 2 Bit.

**SW-O5 No. 6 Stop bit (V.23 RX)**

Number of stop bit of SMS protocol signals checking on receiving signal. 1 Bit or 2 Bit.

**SW-O5 No. 7, No. 8 Reserved**

Set to "0".

**SW-O6 No. 1 SMS function (ON, OFF)**

ON=SMS receiving is enable, OFF= SMS receiving is disable.

**SW-O6 No. 2 SMS carrir select (1st. or 2nd.)**

SMS provider selection.

**SW-O6 No. 3 SMS center check**

When set NO, SMS center check is avoided when CI rings, and always SMS protocol starts.

**SW-O6 No. 4 FAX to FAX communication**

When set YES, you can confirm SMS protocol between this models. (For evaluation only)

**SW-O6 No. 5, No. 6 Reserved**

Set to "0".

**SW-O6 No. 7 Reserved (UX-BD80H/90H)**

Set to "1".

**SW-O6 No. 7 Reserved (UX-BD80DE/90DE/80IT)**

Set to "0".

**SW-O6 No. 8 Reserved**

Set to "0".

**SW-P1 No. 1 ~ No. 8 Reserved**

Set to "0".

**SW-P2 No. 1 Reserved**

Set to "0".

**SW-P2 No. 2, No. 3 Reserved**

Set to "1".

**SW-P2 No. 4 Reserved**

Set to "0".

**SW-P2 No. 5 ~ No. 8 Reserved**

Set to "1".

**SW-P3 No. 1 ~ No. 8 Reserved**

Set to "0".

**SW-P4 No. 1 ~ No. 8 Reserved**

Set to "0".

**SW-P5 No. 1 ~ No. 8 Reserved**

Set to "0".

**SW-P6 No. 1 Ink save mode**

If set to "1", printing is done with half of ink.

**SW-P6 No. 2 Half tone copy ink save mode printing fixed**

If set to "1", copy of half tone resolution is printed with ink save mode regardless of SW-P6 No. 1 setting. If set to "0", copy of half tone resolution is printed based on SW-P6 No. 1 setting.

**SW-P6 No. 3 Reserved**

Set to "1".

**SW-P6 No. 4 ~ No. 8 Reserved**

Set to "0".

**SW-P7 No. 1 ~ No. 3 OGM/ICM output level to Remote Handset**

Used to control OGM and ICM output level to Remote Handset.

**SW-P7 No. 4, No. 5 Length select for Communication-End beep**

The sounding length of the buzzer for normal end of operation set.

**SW-P7 No. 6 Turn OFF/ON the key error/Communication error etc.**

When set to “1”, the machine will not sound the alert beep when the communication error/printer error/key error are occurred.

**SW-P7 No. 7 Turn OFF/ON for normal end (3sec) beep**

When set to “1”, the machine will not sound the end-beep (3sec) when the communication or copy etc. has finished normally.

**SW-P7 No. 8 Turn OFF/ON for key buzzer.**

When set to “1”, the machine will not sound the key touch tone (except for key error tone).

## [3] Troubleshooting

Refer to the following actions to troubleshoot any of the problems mentioned in 1-4.

[1] A communication error occurs.

[2] Image distortion produced.

[3] Unable to do overseas communication.

[4] Communication speed slow due to FALLBACK.

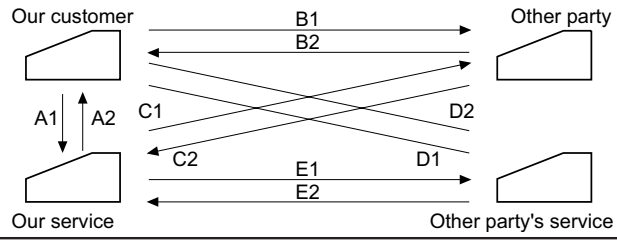
- In crease the transmission level SOFT SWITCH A4-1, 2, 3, 4, 5.
  May be used in case [1] [2] [3].
- Decrease the transmission level SOFT SWITCH A4-1, 2, 3, 4, 5.
  May be used in case [3].
- Apply line equalization SOFT SWITCH A2-1, 2, 3, 4.
  May be used in case [1] [2] [3] [4].
- Slow down the transmission speed SOFT SWITCH A2-1, 2, 3, 4.
  May be used in case [2] [3].
- Replace the LIU PWB.
  May be used in all cases.
- Replace the control PWB.
  May be used in all cases.
- If transmission problems still exist on the machine, use the following format and check the related matters.

TO: ATT: Ref.No. :

CC: ATT: Date :

FM: Dept :

Sign :

| ***** Facsimile communication problem ***** | | | | Ref.No.: |
|---|---|---|---|---|
| From: Mr. | Fax Tel No.: | | | Date: |
| Our customer | Name | | | Tel No. |
| | Address | | | Fax No. |
| | Contact person | | | Model name |
| Other party | Name | | | Tel No. |
| | Address | | | Fax No. |
| | Contact person | | | Model name |
| Problem mode | Line: Domestic / international | | Model: G3 | Phase: A, B, C, D. |
| | Reception / Transmission | Automatic reception / Manual reception | | |
| | | Automatic dialing / Manual dialing / Others | | |
| Frequency: | | % | ROM version: | |
| Confirmation item |  | | | Please mark problem with an X.<br>No problem is: 0. |



| A1 | A2 | B1 | B2 | C1 | C2 | D1 | D2 | E1 | E2 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

Transmission level setting is ( ) dB at our customer

Transmission level ( ) dBm
Reception level ( ) dBm
By level meter at B1 and B2

| Comment | |
|---|---|
| Countermeasure | |

**** Please attach the G3 data and activity report on problem. ****

* Please complete this report before calling the "TAC" hotline if problem still occurs.

# [4] Error code table

## 1. Communication error code table

### 1.1. G3 Transmission

| Code | Final received signal | Error Condition (Receiver side) |
|---|---|---|
| 0 | Incomplete signal frame | Cannot recognize bit stream after flag |
| 1 | NSF, DIS | Cannot recognize DCS signal by echo etc.<br>Cannot recognize NSS signal (FIF code etc.) |
| 2 | CFR | Disconnects line during reception (carrier missing etc.) |
| 3 | FTT | Disconnects line by fall back |
| 4 | MCF | Disconnects line during reception of multi page<br>Cannot recognize NSS, DCS signal in the case of mode change |
| 5 | PIP or PIN | The line is hung up without replying to telephone request from the receiving party. |
| 6 | RTN or RTP | Cannot recognize NSS, DCS signal after transmit RTN or RTP signal. |
| 7 | No signal or DCN | No response in receiver side or DCN signal received* (transmitter side) |
| 8 | - | Owing to error in some page the error could not be corrected although the specified number of error retransmissions were attempted. |
| 11 | - | Error occurred after or while reception by the remote (receiving) machine was revealed to be impossible. |
| 12 | - | Error occurred just after fallback. |
| 13 | - | Error occurred after a response to retransmission end command was received. |

### 1.2. G3 Reception

| Code | Final received signal | Error Condition (Receiver side) |
|---|---|---|
| 0 | Incomplete signal frame | Cannot recognize bit stream after flag |
| 1 | NSS, DCS | Cannot recognize CFR or FTT signal<br>Disconnects line during transmission (line error) |
| 2 | NSC, DTC | Cannot recognize NSS signal (FIF code etc.) |
| 3 | EOP | Cannot recognize MCF, PIP, PIN, RTN, RTP signal |
| 4 | EOM | Cannot recognize MCF, PIP, PIN, RTN, RTP signal in the case of mode change |
| 5 | MPS | The line is hung up without replying to communication request. |
| 6 | PR1-Q | Cannot recognize PIP, PIN signal in the case of TALK request |
| 7 | No signal or DCN | No response in transmitter (cannot recognize DIS signal) or DCN signal received* (receiver side) |
| 8 | - | Error occurred upon completion of reception of all pages. |
| 9 | - | Error occurred when mode was changed or Transmission/Reception switching was performed. |
| 10 | - | Error occurred during partial page or physical page reception. |
| 11 | - | Error occurred after or during inquiry from the remote (transmitting) machine as to whether reception is possible or not. |
| 12 | - | Error occurred during or just after fallback. |
| 13 | - | Error occurred after the retransmission end command was received. |

# CHAPTER 3. MECHANISM BLOCKS

## [1] General description

### 1. Document feed block and diagram

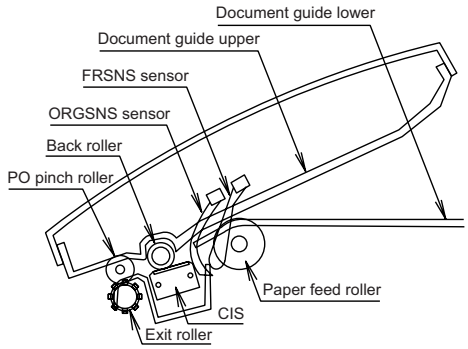



**Fig. 1**

### 2. Document feed operation

1) The original, which is set in the document hopper, feeds automatically when the FRSNS sensor is activated. This in turn activates the drive motor which drives the paper feed roller. The document stops when the lead edge is detected by the ORGSNS sensor.
2) The lead edge of the original is fed a specified number of pulses after the lead edge of the document is detected for the reading process to begin.
3) The trailing edge of the original is fed a specific number of pulses after the trailing edge of the document deactivates the ORGSNS sensor. The read process then stops and the original is discharged.
4) When the FRSNS sensor is in the OFF state (any document is not set up in the hopper guide), the drive will be stopped when the document is discharged.

### 3. Hopper mechanism

#### 3.1. General view

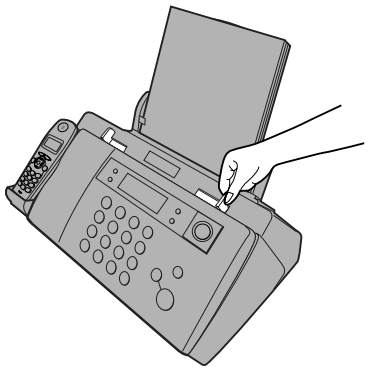


**Fig. 2**

The hopper section contains document guides that are used to adjust the hopper to the width of the original document. This ensures that the original feeds straight into the fax machine for scanning.

Document width: 148 mm to 216 mm (A5 longitudinal size to Letter longitudinal size)

NOTE: Adjust the document guide after setting up the document.

#### 3.2. Automatic document feed

1) Use of the paper feed roller and separate plate ensures error-free transport and separation of documents. The paper feed plate spring presses the document to the paper feed roller to assure smooth feeding of the document.
2) Document separation method: Separate plate

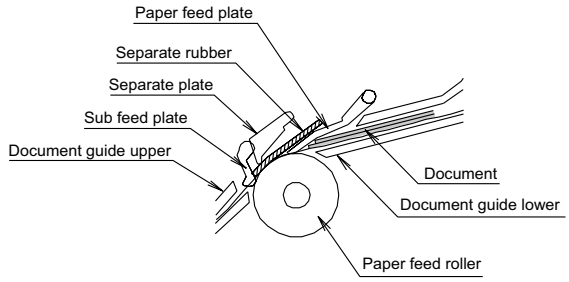



**Fig. 3**

#### 3.3. Documents applicable for automatic feed

| | 10 sheets | 1sheet(Manual) |
|---|---|---|
| Paper weight | 21.5 lbs.<br>(80 g/m$^2$) | 14 lbs. ~ 42 lbs.<br>(52 g/m$^2$ ~ 157g/m$^2$) |
| Paper thickness (ref.) | 0.1 mm | 0.1 mm ~ 0.18mm |
| Paper size | LGL (216 mm x 355.6 mm)<br>A4 (210 mm x 297 mm)<br>LTR (216 mm x 279 mm) | |
| Feeder capacity | A4/LTR: 10 sheets max.<br>LGL : 5 sheets max. | |

NOTE: Double-side coated documents and documents on facsimile recording paper should be inserted manually. The document feed quantity may be changed according to the document thickness.

Documents corresponding to a paper weight heavier than 70 kg (80 g/m$^2$) and lighter than 135 kg (157 g/m$^2$) are acceptable for manual feed.

Documents heavier than 135 kg (157 g/m$^2$) in terms of the paper weight must be duplicated on a copier to make it operative in the facsimile.

#### 3.4. Loading the documents

1. Make sure that the documents are of suitable size and thickness, and free from creases, folds, curls, wet glue, wet ink, clips, staples and pins.
2. Place documents face down in the hopper.
   i) Adjust the document guides to the document size.
   ii) Align the top edge of documents and gently place them into the hopper. The first page under the stack will be taken up by the feed roller to get ready for transmission.

NOTE: 1) Curled edge of documents, if any, must be straightened out.
2) Do not load the documents of different sizes and/or thicknesses together.

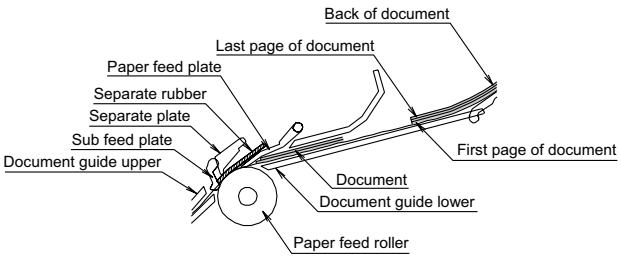



**Fig. 4**

### 3.5. Documents requiring use of document carrier

1) Documents smaller than 148mm (W) x 140mm (L).
2) Documents thinner than the thickness of 0.06mm.
3) Documents containing creases, folds, or curls, especially those whose surface is curled (maximum allowable curl is 5mm).
4) Documents containing tears.
5) Carbon-backed documents. (Insert a white sheet of paper between the carbon back and the document carrier to avoid transfer of carbon to the carrier.)
6) Documents containing an easily separable writing material (e.g., those written with a lead pencil).
7) Transparent documents.
8) Folded or glued documents.
   Document in document carrier should be inserted manually into the feeder.

## 4. Document release

### 4.1. General

To correct a jammed document or to clean the document running surface, pull the insertion side of document center of the operation panel. To open the upper document guide, the operation panel must be opened first.

## 5. Recording block

1) The pulse motor is rotated by the PICK UP ROLLER to feed the recording sheet. The PICKUP ROLLER feeds one by one from the top sheet.
2) The recording sheet contacts the P-IN SENSOR.
3) The FEED ROLLER rotates in the reverse direction of paper feed (refer to the figure of PICKUP ROLLER). The tip of recording sheet is set parallel to the FEED ROLLER when it reaches to the FEED ROLLER and the PRESS ROLLER after through the PICK UP ROLLER.
4) Then the FEED ROLLER rotates in the paper feed direction to feed the recording sheet downwards. (refer to the figure of PAPER FEED)
5) The CARTRIDGE prints the recording sheet, which is then ejected by the EXIT ROLLER and STAR WHEEL.

### 5.1. General view

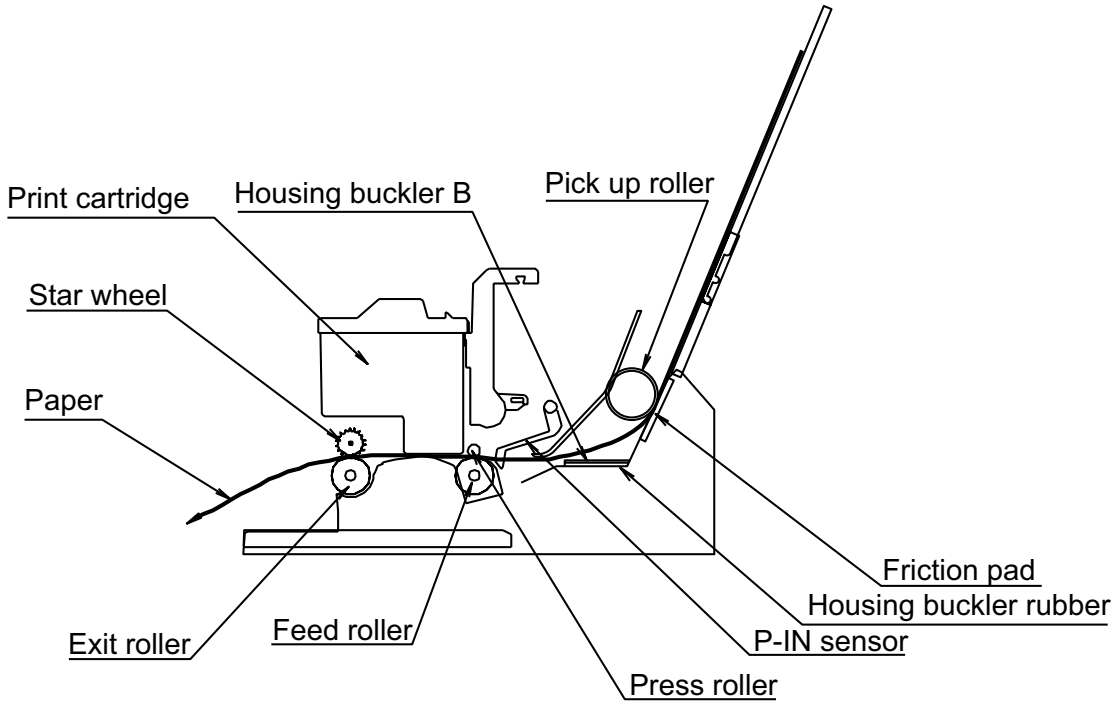



**Fig. 5**

# [2] Ink jet printer

## 1. Engine specifications

### 1.1. Mechanism

Resolution:600dpi x 600dpi address ability

Print speed:2.9PPM text with black cartridge

Print swath:8 inches

Duty cycle:250 pages per month average

Dimensions:330mm x 100mm x 130mm

Weight:1.98punds(900g)(1p=453g)

Acoustics:50db in letter quality mode

### 1.2. Electrical

No electrical hardware included with the type B engine except for the carrier drive stepping motor, the Sensor FPC assembly which includes a photo interrupter for sensing home position, the carrier cables, and the printhead cable.

## 2. Abbreviations

EOF End-of Form

ESD Electrostatic Discharge

FRU Field Replaceable Unit

HVPS High Voltage Power Supply

LVPS Low Voltage Power Supply

OEM Original Equipment Manufacturer

POST Power-On Self Test

V ac Volts alternating current

V dc Volts direct current

ZIF Zero Insertion Force

## 3. Diagnostic information

### 3.1. Print cartridge

Black Print Cartridge 208 Nozzles

Pigment based(Water proof)

initial cartridge

Approx.yield 300 letter pages at 4%coverage

Replacement cartridge:SHARP **UX-C70B**

Approx.yield 600 letter pages at 4%coverage

* When Ink Save mode is enabled.

### 3.2. Start

**Power-On Self Test (POST) Sequence**

When you turn the printer on it performs a POST. Turn the machine on and check for a correct POST operation by observing the following:

1. The carrier moves.
2. The paper feed gears turn.
3. After 30 seconds the carrier moves over the maintenance station and caps the printhead.
4. All motors stop

## 4. Circuit description

### 4.1. General description

The compact design of Ink PWB is obtained by using Head Driver IC and Home position Sensor.

### 4.2. Electrical system

The PWB provides mechanical control for Ink Jet Printer. Fig. 1 shows the interconnection of PWB and other electrical component in the print mechanism.

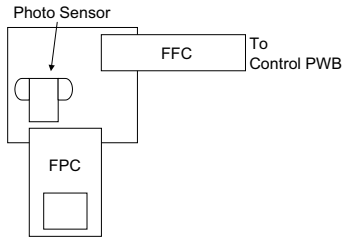



**Fig. 1**

### 4.3. Electrical overview

The information in this section appears in a sequence relative to the system diagram in the following figure.

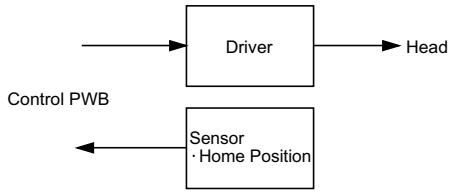



**Fig. 2**

### 4.4. Power supply connector

The mechanism requires two voltages (+3.3V, +11.82V and +30V). These three voltages supplied from CNHEAD1 connector.

### 4.5. Host interface connector

FFC on the Ink PWB provides 23 lines from the host unit, for control of various operating options available to the host. The two primary functions of the host interface are:

Printing data for the Ink Jet Printer

Error status to the host

### 4.6. Driver IC

One driver IC drive 208 (MONO) nozzles on the cartridge. This driver IC, located on the Ink PWB, also connected back to the ASIC, on Control PWB.

### 4.7. Ink cartridge carrier

The carriage connects via a FPC on the Ink PWB. The ink cartridge contacts connect to the carriage contacts. The ASIC controls the carriage and ink cartridge.

### 4.8. Home position

The photo sensor is turned ON/OFF by the plate projecting from the frame chassis.

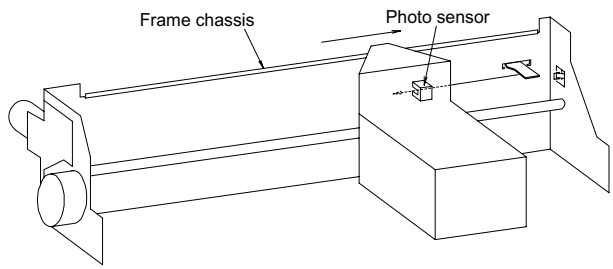
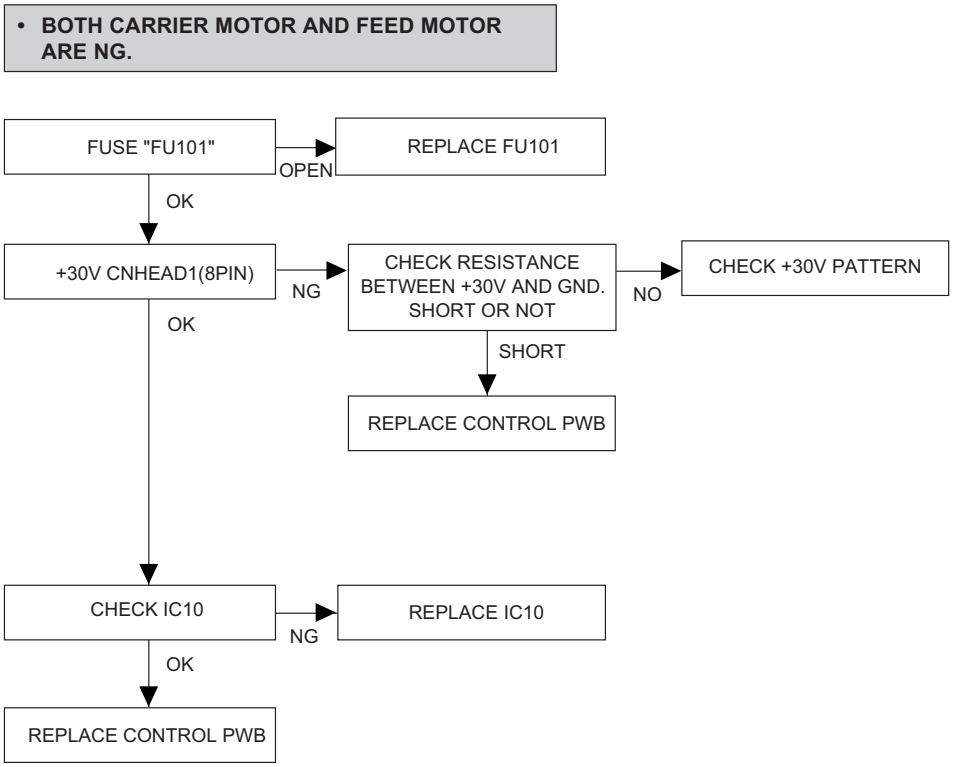
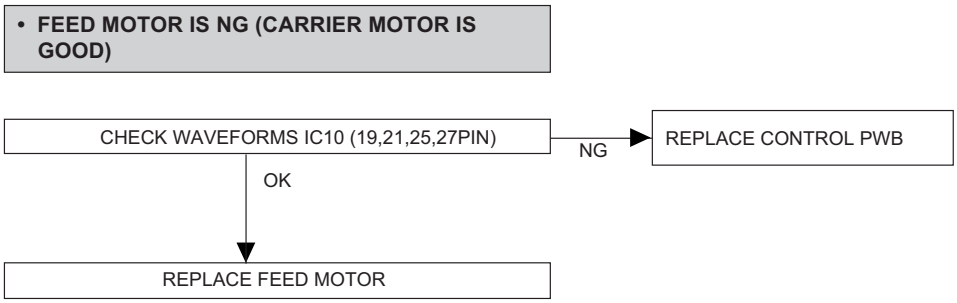
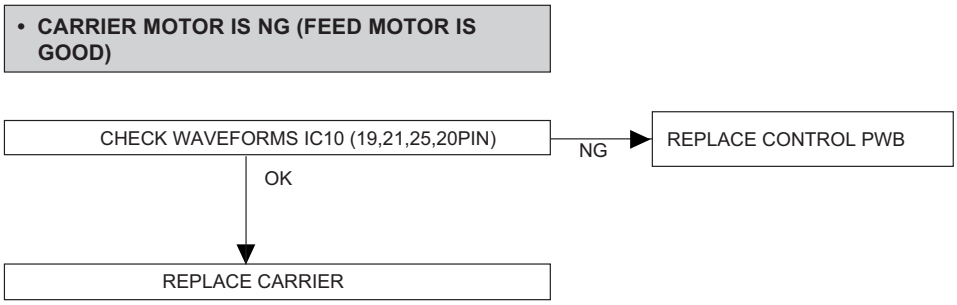



**Fig. 3**

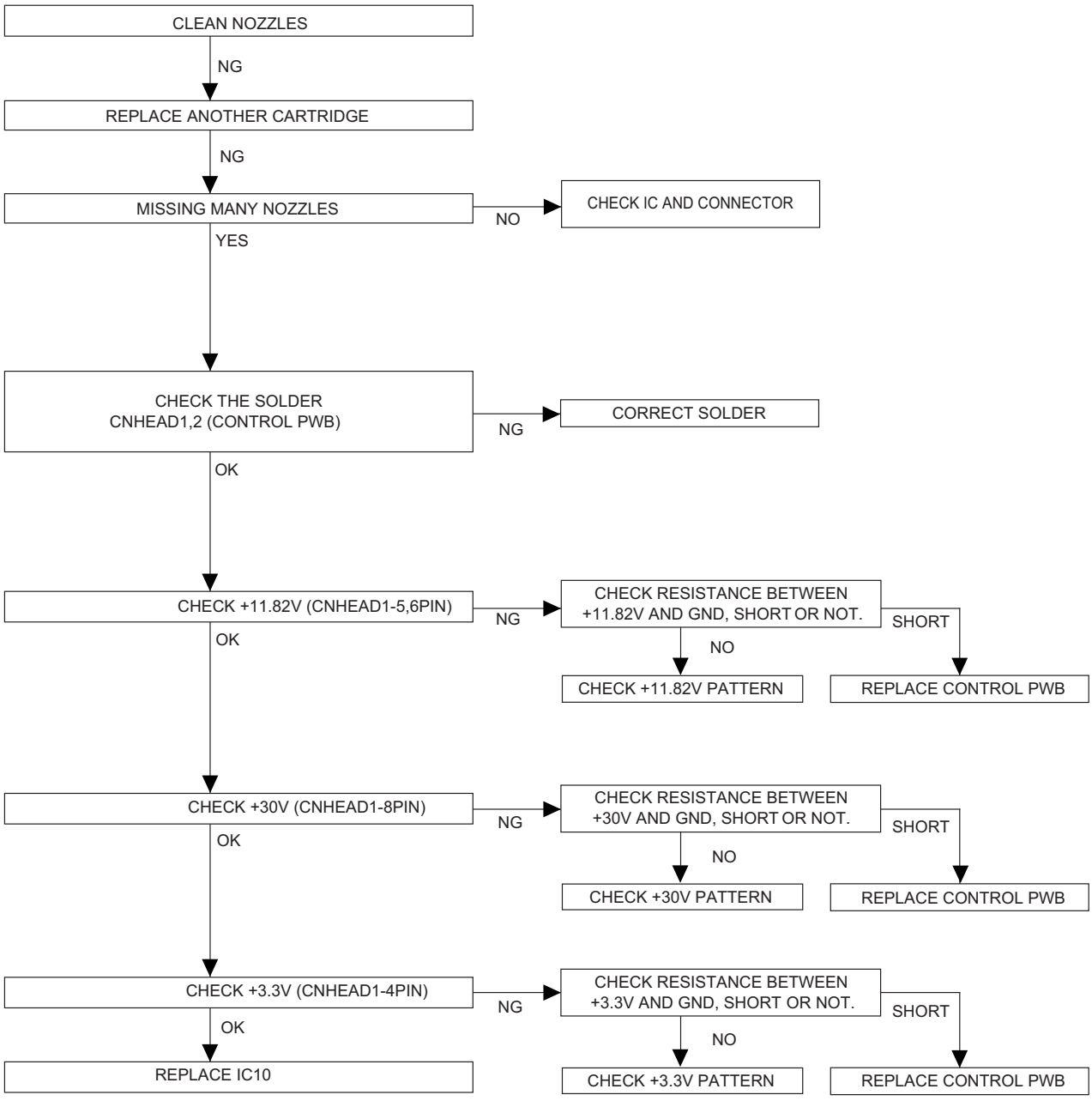
**5. Overall troubleshooting of Printer**



**• MISSING NOZZLES (RESULT OF CHECK PATTERN OR CLEAN NOZZLES)**



## [3] Disassembly and assembly procedures

- This chapter mainly describes the disassembly procedures. For the assembly procedures, reverse the disassembly procedures.
- Easy and simple disassembly/assembly procedures of some parts and units are omitted. For disassembly and assembly of such parts and units, refer to the Parts List.
- The numbers in the illustration, the parts list and the flowchart in a same section are common to each other.
- To assure reliability of the product, the disassembly and the assembly procedures should be performed carefully and deliberately.

| | |
|---|---|
| **1** | **Cordless PWB unit/ASF cover/ Charger cover unit/Top cabinet/ Document guide under** |

Parts list (Fig. 1)

| No. | Part name | Qty | No. | Part name | Qty |
|---|---|---|---|---|---|
| 1 | Mechanism unit | 1 | 9 | ASF cover | 1 |
| 2 | Screw (3x12) | 1 | 10 | Screw (3x12) | 3 |
| 3 | Cordless PWB case | 1 | 11 | Screw (3x10) | 1 |
| 4 | Cordless PWB unit | 1 | 12 | Charger cable | 1 |
| 5 | Cordless PWB cable | 1 | 13 | Charger cover unit | 1 |
| 6 | Cordless PWB cover | 1 | 14 | Top cabinet | 1 |
| 7 | Screw (3x12) | 2 | 15 | Document guide under | 1 |
| 8 | Screw (3x10) | 1 | | | |

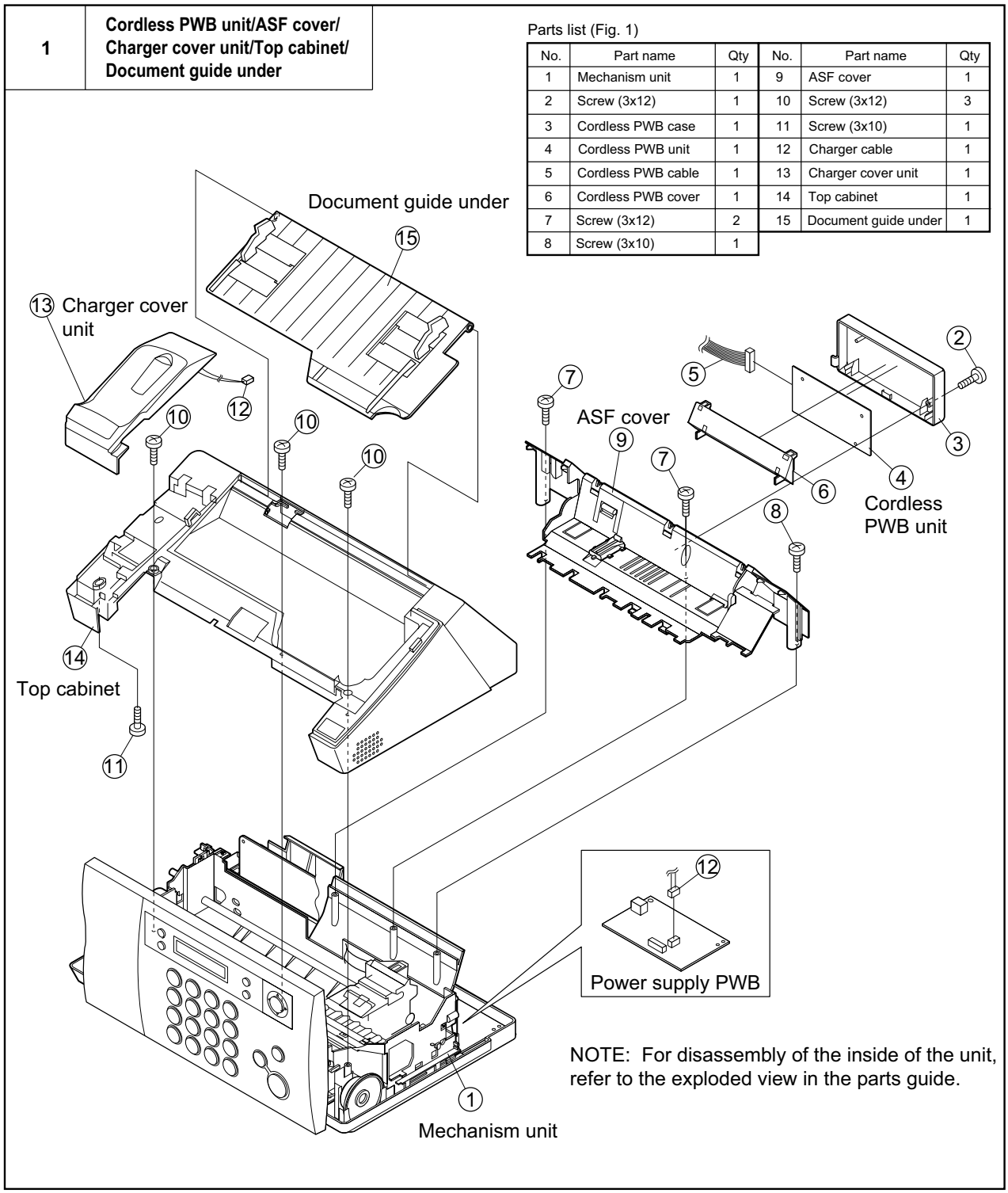



**Fig.1**

| 2 | **Main frame unit/Operation panel unit/ Speaker** |
|---|---|

NOTE: For disassembly of the inside of the unit, refer to the exploded view in the parts guide.

Parts list (Fig. 2)

| No. | Part name | Qty | No. | Part name | Qty |
|---|---|---|---|---|---|
| 1 | Mechanism unit | 1 | 6 | Speaker spring | 1 |
| 2 | Connector | 2 | 7 | Speaker | 1 |
| 3 | Screw (3x10) | 5 | 8 | Screw (3x10) | 1 |
| 4 | Screw (3x10) | 1 | 9 | Operation panel unit | 1 |
| 5 | Screw (3x6) | 1 | 10 | Main frame unit | 1 |

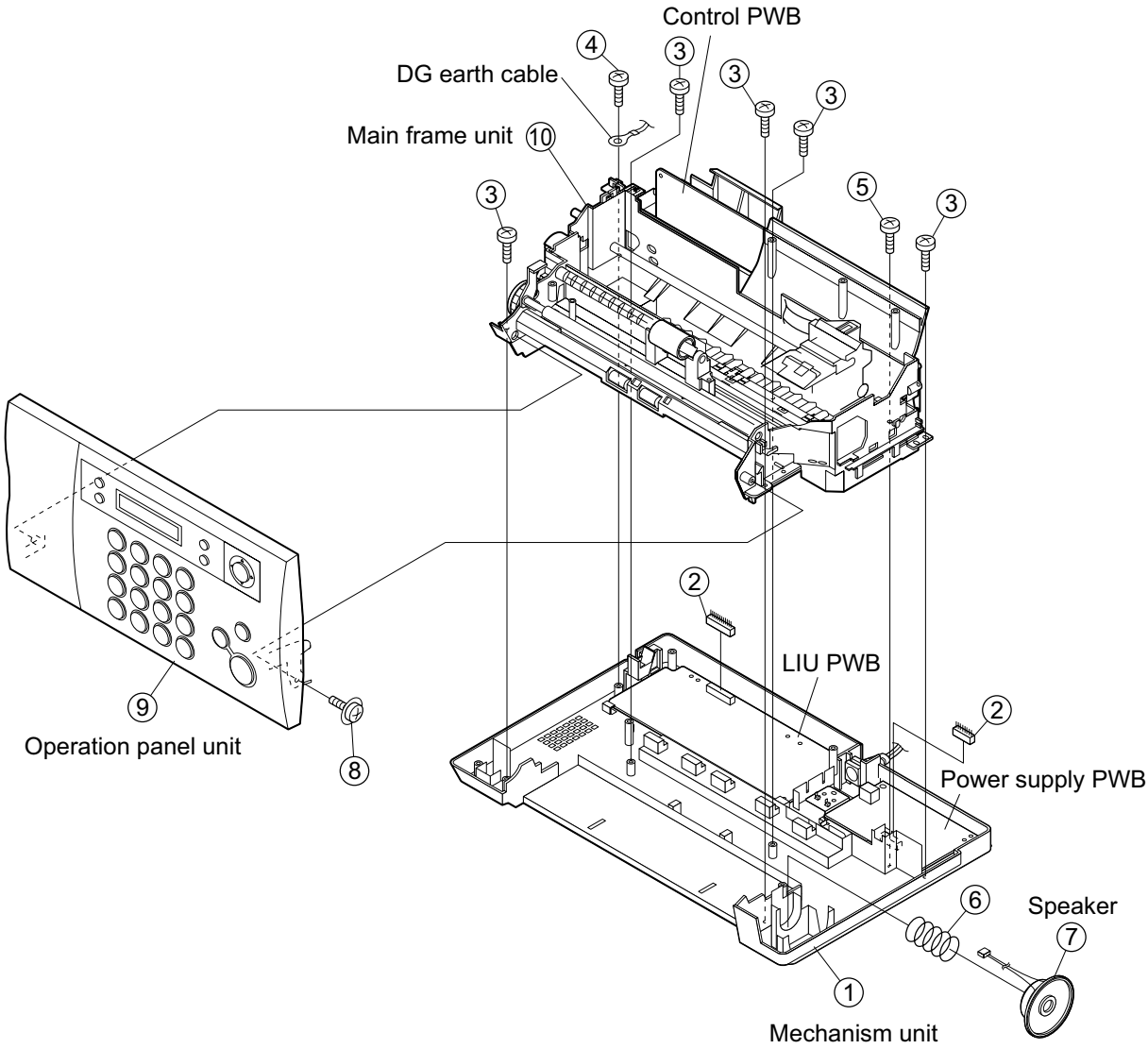



**Fig.2**

| 3 | **PWB's** |
|---|---|

NOTE: For disassembly of the inside of the unit, refer to the exploded view in the parts guide.

Parts list (Fig. 3)

| No. | Part name | Qty | No. | Part name | Qty |
|---|---|---|---|---|---|
| 1 | Mechanism unit | 1 | 7 | Power supply PWB unit | 1 |
| 2 | Screw (3x10) | 2 | 8 | Screw (3x6) | 3 |
| 3 | Screw (3x6) | 1 | 9 | Sheet | 1 |
| 4 | LIU PWB unit | 1 | 10 | Connector | 7 |
| 5 | Screw (3x10) | 1 | 11 | Flat cable | 2 |
| 6 | Screw (4x6) | 1 | 12 | Control PWB unit | 1 |

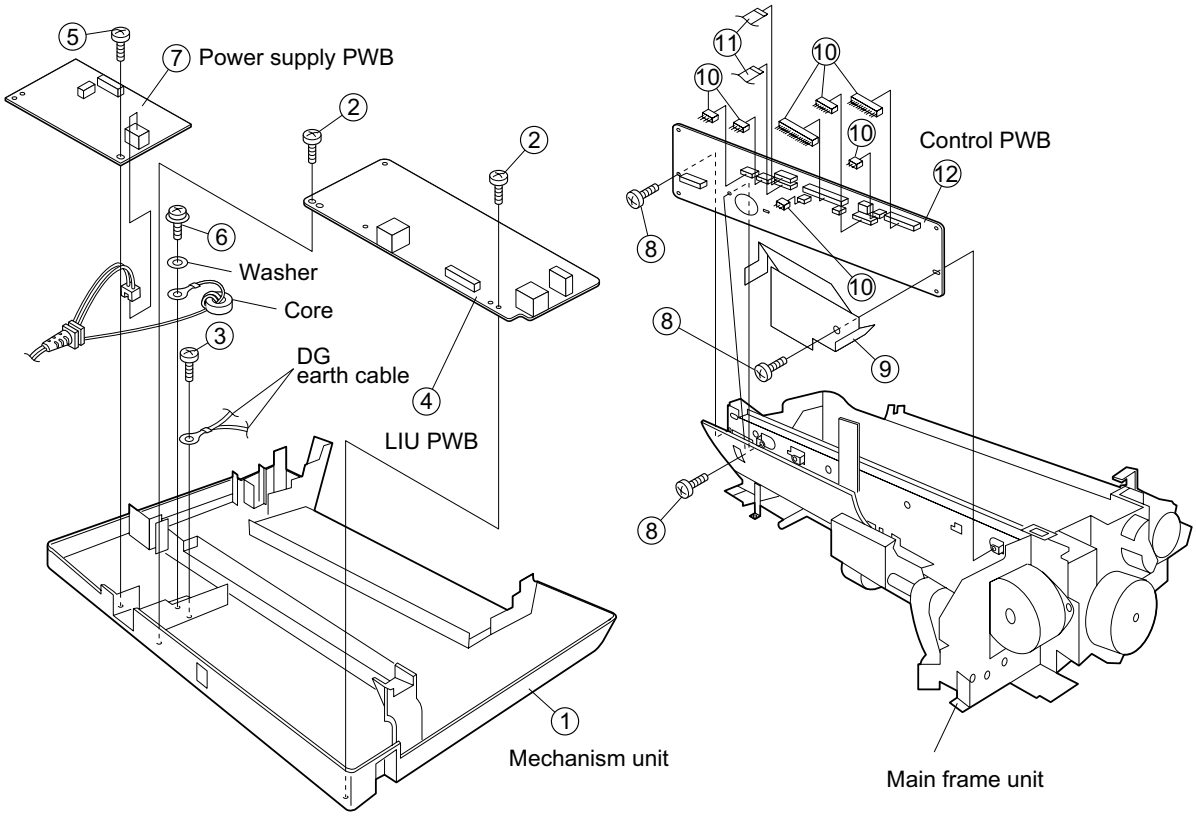
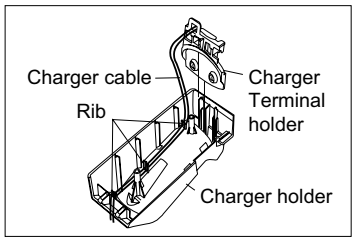


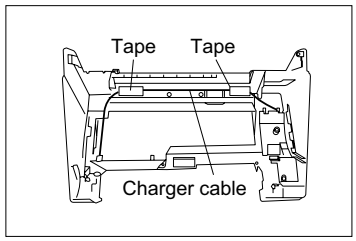

**Fig.3**

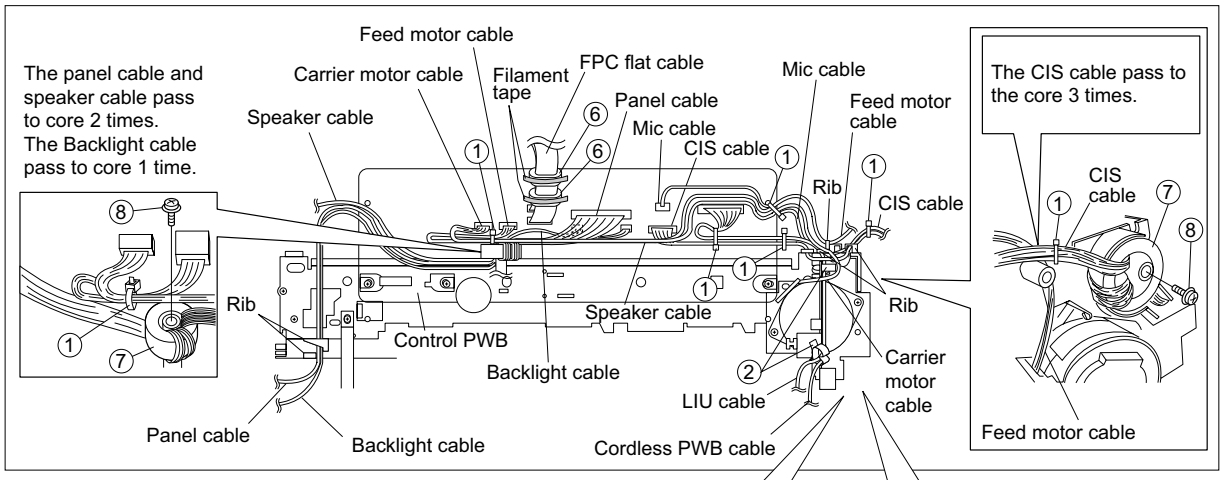
## 4 Wire treatment

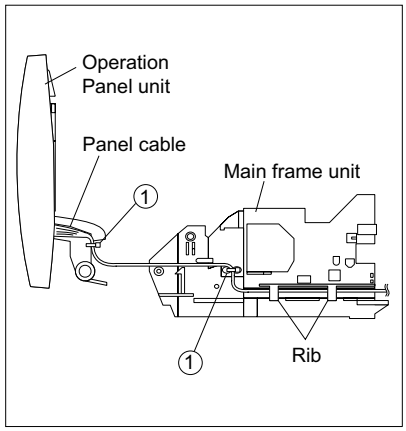
Parts list (Fig. 4)

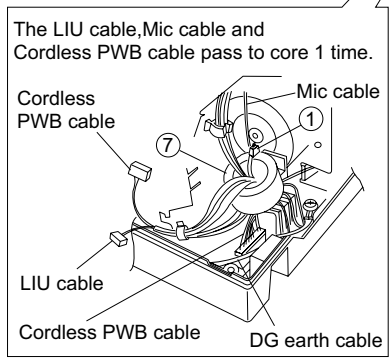
| No. | Part name | Qty |
|---|---|---|
| 1 | Band (100mm) | 9 |
| 2 | Wire holder | 2 |
| 3 | Screw (4x6) | 1 |
| 4 | Screw (3x6) | 1 |
| 5 | Core (F2147) | 1 |
| 6 | Core (F0049) | 2 |
| 7 | Core (F2146) | 3 |
| 8 | Screw with washer | 3 |

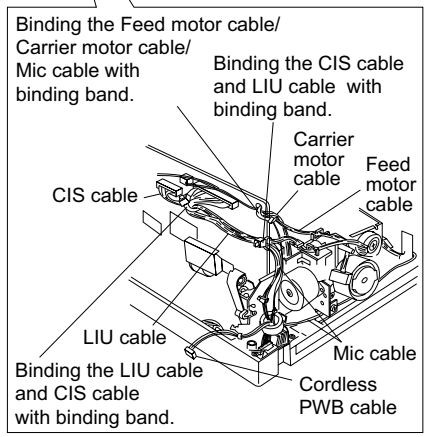


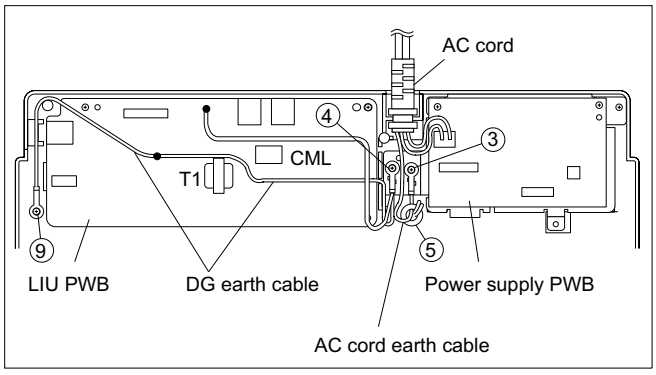



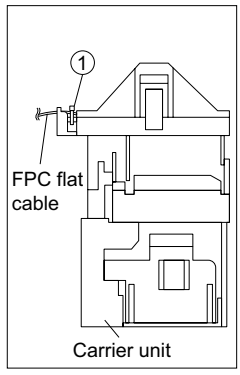



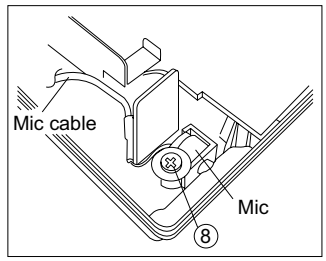





The LIU cable,Mic cable and Cordless PWB cable pass to core 1 time.
Cordless PWB cable
Mic cable
LIU cable
Cordless PWB cable
DG earth cable


Binding the Feed motor cable/ Carrier motor cable/ Mic cable with binding band.
Binding the CIS cable and LIU cable with binding band.
Carrier motor cable
Feed motor cable
CIS cable
LIU cable
Mic cable
Binding the LIU cable and CIS cable with binding band.
Cordless PWB cable



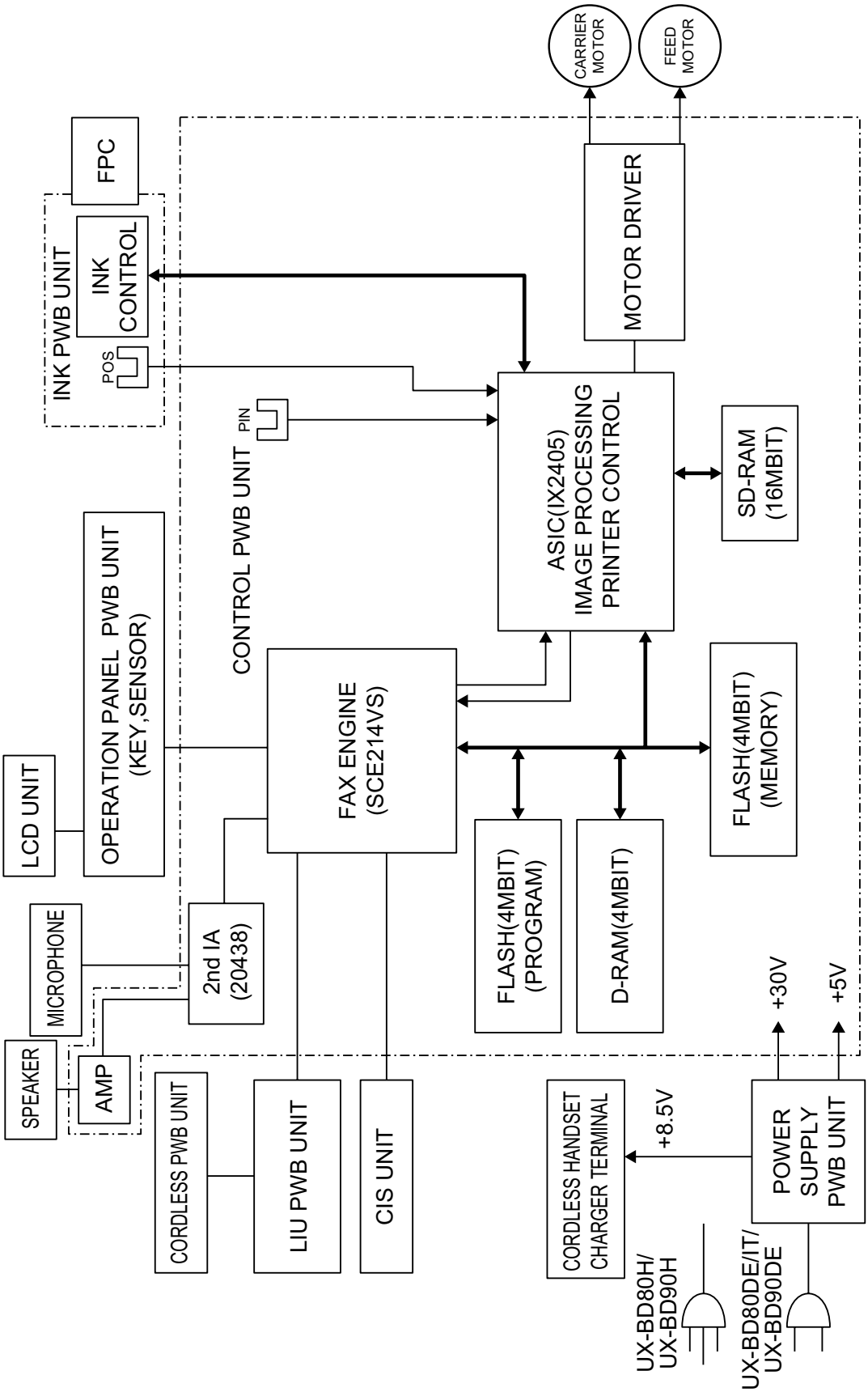




⑤ : The AC cord earth cable pass to the core 3 times.

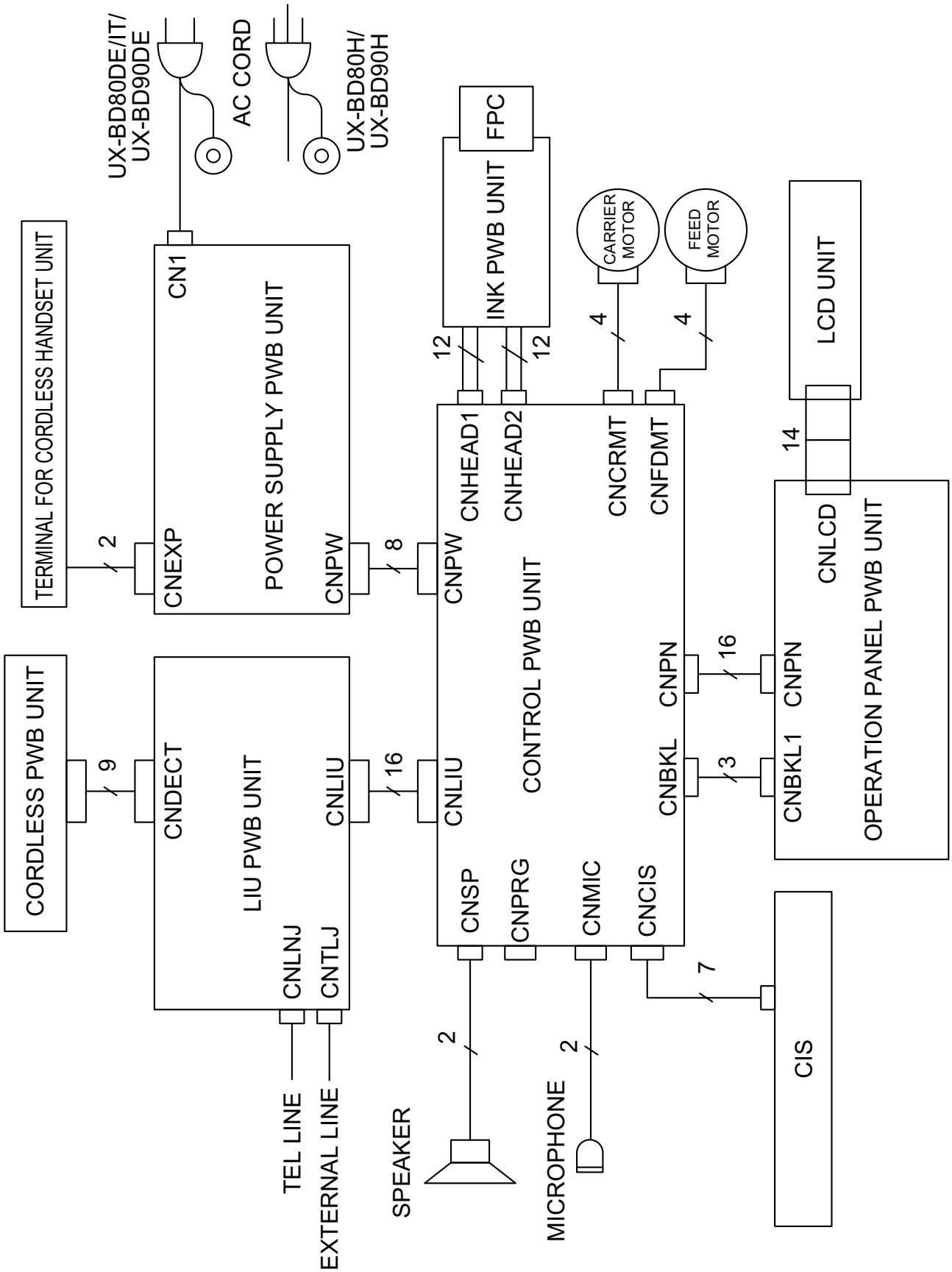
**Fig.4**

# CHAPTER 4. DIADRAMS

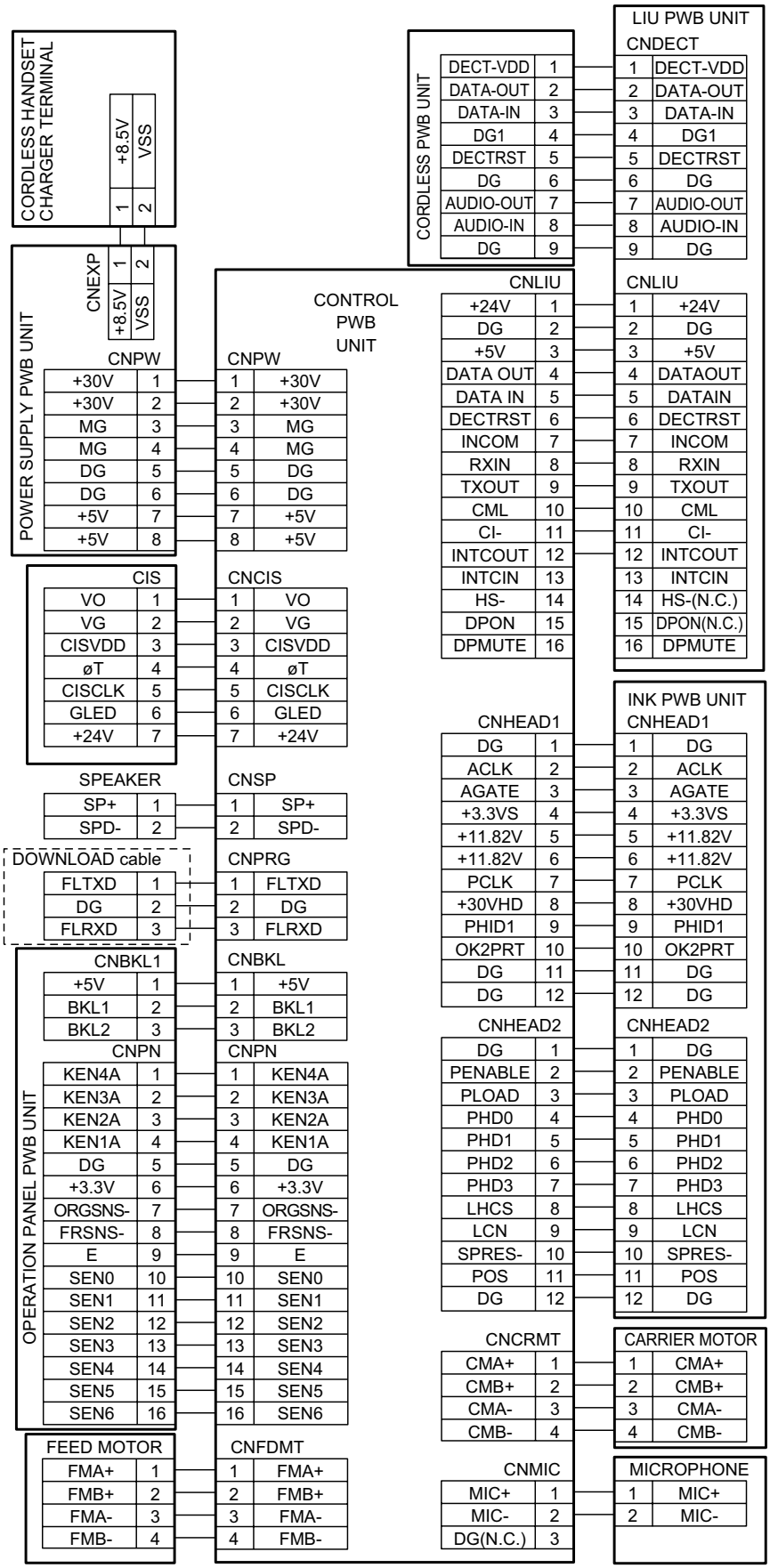
## [1] Block diagram



**[2] Wiring diagram**



## [3] Point-to-point diagram



# CHAPTER 5. CIRCUIT DESCRIPTION

## [1] Circuit description

### 1. General description

The compact design of the control PWB is obtained by using CONEXANT fax engine in the main control section and high density printing of surface mounting parts. Each PWB is independent according to its function as shown in Fig. 1.

### 2. PWB configuration

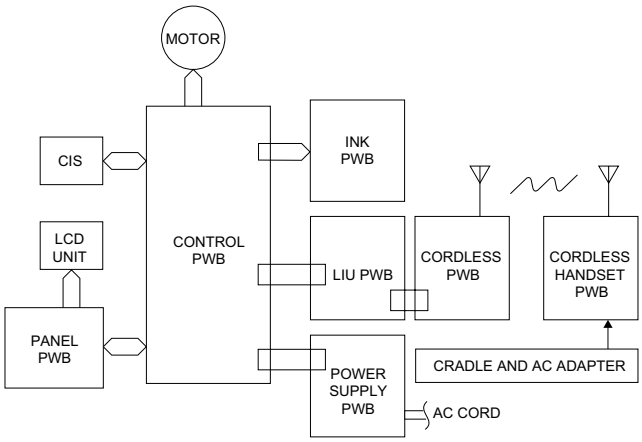



**Fig.1**

#### 2.1. Control PWB

The Control PWB controls peripheral PWBs, mechanical parts, transmission, and performs overall control of the unit. This machine employs a 1-chip modem (SCE214VS) which is installed on the Control PWB.

#### 2.2. LIU PWB

This PWB controls connection of the telephone line to the unit.

#### 2.3. Power supply PWB

This PWB provides voltages of +5V, +8.5V and +30V to the other PWBs.

#### 2.4. Panel PWB

The panel PWB allows input of the operation keys.

#### 2.5. LCD UNIT

This unit controls the LCD display.

#### 2.6. Ink PWB

This PWB controls the Ink cartridge.

#### 2.7. Cordless PWB

This PWB performs a communication with Cordless Handset by 1.9 GHz radio frequency and is connected with fax machine on the control PWB by using its serial I/F and audio IN/OUT signals.

#### 2.8. Cordless Handset PWB

This PWB is for a Cordless Handset and is communicated with Cordless PWB by 1.9 GHz radio frequency. To communicate, both Cordless PWB and Cordless Handset PWB have individual system ID.

#### 2.9. Cradle and AC adapter

The input voltage of AC adapter is transformed about +8.5 volt output, which is supplied to charge battery of the Cordless Handset by cradle.

### 3. Operational description

Operational descriptions are given below:

- Transmission operation

  When a document is loaded in stand-by mode, the state of the document sensor is sensed via the 1 chip fax engine (SCE214VS). With depression of the START key in the off-hook state, transmission takes place. Then, the procedure is sent out from the modem and the motor is rotated to move the document down to the scan line. In the scan processor, the signal scanned by the CIS is sent to the internal image processor and the AD converter to convert the analog signal into binary data. This binary data is transferred from the scan processor to the image buffer within the RAM and encoded and stored in the transmit buffer of the RAM. The data is then converted from parallel to serial form by the modem where the serial data is modulated and sent onto the line.

- Receive operation

  There are two ways of starting reception, manual and automatic. Depression of the START key in the off-hook mode in the case of manual receive mode, or CI signal detection by the LIU in the automatic receive mode. First, the SCE214VS controls the procedure signals from the modem to be ready to receive data. When the program goes into phase C, the serial data from the modem is converted to parallel form in the modem interface of the 1 chip fax engine (SCE214VS) which is stored in the receive buffer of the RAM. The data in the receive buffer is decoded software-wise to reproduce it as binary image data in the image buffer. The data is sent to ASIC by serial data. ASIC controls printing system.

- Copy operation

  To make a copy on this facsimile, the COPY key is pressed when the machine is in stand-by with a document on the document table and the telephone set is in the on-hook state. First, depression of the COPY key advances the document to the scan line. Similar to the transmitting operation, the image signal from the CIS is converted to a binary signal in the DMA mode via the 1 chip fax engine (SCE214VS) which is then sent to the image buffer of the RAM. Next, the data is transferred to ASIC and modify the data to send to Ink Control (Ink PWB) ASIC controls Feed Motor and Carrier Motor.

# [2] Circuit description of control PWB

## 1. General description

Fig. 2 shows the functional blocks of the control PWB, which is composed of 6 blocks.

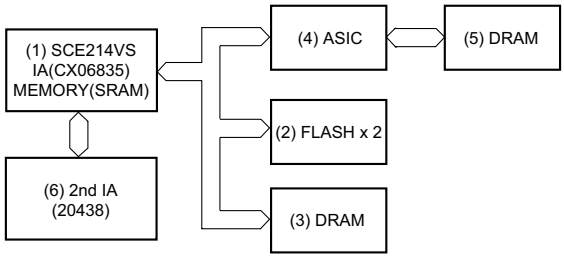



**Fig. 2 Control PWB functional block diagram**

## 2. Description of each block

### 2.1. Main control block

The main control block is composed of CONEXANT 1 chip fax engine (SCE214VS), FLASH (4Mbit x 2), DRAM (16Mbit), ASIC (μPD65945).

Devices are connected to the bus to control the whole unit.

#### 2.1.1 SCE214VS (IC5): pin-176 QFP (FAX CONTROLLER)

1 chip fax engine has Internal Integrated Analog (CX06835) and Internal memory (SRAM : 32kbit).

#### 2.1.2 PM39LV040 (IC7, IC8): pin-32 TSOP (FLASH)

FLASH of 4Mbit equipped with software for the main CPU (IC7).

FLASH of 4Mbit equipped for Voice Memory (IC8).

#### 2.1.3 MSM51V4800E (IC1): pin-28 SOJ (DRAM)

- Image memory for recording process.
- Memory for recording pixel data without paper.
- Memory for system work and ECM receive buffer.

#### 2.1.4 μPD65945 (IC4): pin-144 TSOP (ASIC)

ASIC between SCE214VS and Ink Control.

It converts the resolution and the aspect ratio of the serial scanning data sent by SCE214VS and sends the converted data to Spitfire by parallel IF.

#### 2.1.5 M12L16161A-7TG (IC3): pin-28 SOJ (DRAM)

Dedicated image buffer for ASIC (IC4).

#### 2.1.6 20438 (IC11): pin-32 QFP (secondary IA)

This IC is IA for speakerphone. The function are gain adjust and AD/DA converting. The microphone is connected to this IA.

### 2.2. IC5 (SCE214VS) Hardware description

#### 2.2.1 Integrated Controller (SCC)

The Controller contains an internal MC24 Processor with a 16-MB address space and dedicated circuitry optimized for facsimile image processing and monitoring and for thermal or thermal transfer printer support. The CPU provides fast instruction (up to 10 MHz clock speed) execution and memory efficient input/output bit manipulation. The CPU connects to other internal functions over an 8-bit data bus and 24-bit address bus and dedicated control lines. The 24-bit external address bus, 8-bit data bus, control, status and decoded chip select signals support connection to external DRAM and FLASH memory.

#### 2.2.2 DRAM Controller

The CX06835 includes a DRAM controller with signal and page mode access support which supports fast, normal, or slow refresh time. DRAM memory space is provided in one block up to 4 MB. A maximum of 4 MB of DRAM is supported. This space has a programmable size and starting address. Refresh is performed automatically and is supported in stand-by mode. CAS and RAS signal support is provided for one-DRAM banks for both 4-bit and 8-bit organizations. Access speeds from 50ns to 70ns can be supported.

#### 2.2.3 DMA Channels

Six internal DMA channels support memory access for scanner, T.4/T.6, and resolution conversion. DMA Channel 2 can be reprogrammed for external access to thermal printing, thermal transfer, or plain paper inkjet printing.

#### 2.2.4 External RAM and ROM

Moveable and programmable size external SRAM memory of up to 1 MB, DRAM memory of up to 4 MB, and ROM of up to 2 MB can be directly connected to the SCE214VS. By using an external address decoder, the size of SRAM and/or ROM can be extended. The ROM stores all the program object code.

#### 2.2.5 Flash Memory Controller

The SCE214VS includes a flash memory controller that supports NOR, NAND, and Serial NAND-type flash memory. The supported size of NOR-type memory is up to 1 MB and the supported size of NAND-type memory is unlimited.

#### 2.2.6 Stepper Motor Control

Eight outputs are provided to external current drivers: four to the scanner motor and four to the printer motor. The stepping patterns are programmable and selectable line times are supported. A time out circuit controls the power control of the motors. The printer or scanner motor outputs can be programmed as GPOs for applications using single motor or paper printers.

#### 2.2.7 T.4/T.6 Compression/Decompression

MH, MR and MMR compression and decompression are provided in hardware. T.4 line lengths of up to 8192 pixels are supported. MMR and Alternating Compression/Decompression (ACD) on a line by line basis provide support for up to three independent compression and decompression processes.

#### 2.2.8 Bi-level Resolution Conversion

One independent programmable bi-level 1D-resolution conversion block is provided to perform expansion or reduction on the T.4 decompressed data and scan image data. Image expansion can be programmed up to 200% and reduction down to 33%. Vertical line O-Ring and data output bit order reversal is also provided.

#### 2.2.9 Printer IF

The Printer Interface provides a standard connection between the SCE214VS and a thermal printhead to support thermal printing or thermal transfer. The thermal printer interface consists of programmable data, latch, clock, and up to four strobe signals. Programmable timing supports traditional thermal printers, as well as the latchless split mode printers, and line lengths of up to 2048 pixels. Line times from 5 ms to 40 ms are supported. The SCE214VS includes a thermal ADC (TADC) function utilizing a D/A converter and a comparator to monitor the printhead temperature. External terminating resistors must be supplied; the values are determined by the specific printhead selected. As an option, plain paper inkjet printing can be supported.

### 2.2.10 Scanner and Video Control

Five programmable control and timing signals support common CCD and CIS scanners. The video control function provides signals for controlling the scanner and for processing its video output. Three programmable control signals (START, CLK1n, and CLK2) provide timing related to line and pixel timing. These are programmable with regard to start time, relative delay and pulse width. Two video control output signals (VIDCTL[1:0]) provide digital control for external signal preprocessing circuitry. These signals provide a per pixel period, or per line period, timing with programmable polarity control for each signal.

### 2.2.11 Video Processing

The CX06835 supports two modes of shading correction for scanner data non-uniformity arising from uneven sensor output or uneven illumination. Corrections are provided on either an 8-pixel group or are applied separately to each pixel. Dark level correction and gamma correction are also provided. Two-dimensional Error Diffusion/Dithering is performed on halftone images. The CX06835 includes an 8 x 8 dither table, which is programmable and stored internally (8-bit per table entry). The table is arranged in a matrix of 8 rows by 8 columns. The video processing circuit provides mixed-mode detection/processing and multi-level Resolution Conversion for the scanner multi-level data. The conversion ratio of the multi-level Resolution Conversion is fixed to B4-A4 conversion.

### 2.2.12 Operator Panel Interface

Operation Panel functions are supported by the operator output bus OPO[6:0], the operator input bus OP[3:0], and two control outputs (LCDCS and LEDCTRL). The CX06835 can directly interface to a 28-key keypad. A 2-line LCD display module with 20 characters per line can be supported.

### 2.2.13 Synchronous Serial Interface (SSIF)

One or optionally two Synchronous only Serial Interfaces (SSIF) are built into the CX06835, which allows it to communicate with external peripherals. Each SSIF provides separate signals for Data (SSTXD, SSRXD), Clock (SSCLK), and Status (SSSTAT). Each SSIF is a duplex, three-wire system. The SSIF may be configured to operate as either a master or a slave interface. The bit rate, clock polarity, clock phase, and data shifting order are programmable.

### 2.2.14 Synchronous/Asynchronous Serial Interface (SASIF)

One or optionally two Synchronous/Asynchronous Serial Interface (SASIF) performs the following:

- Serial-parallel conversion of data received from a peripheral device.
- Parallel-to-serial conversion of data for transmission to a peripheral device.

This interface consists of serial transmit data (SASTXD), serial receive data (SASRXD), and a serial clock(SASCLK). The SASIF includes a programmable bit rate generator for asynchronous and synchronous operations. The data shifting order, data bit number, and the SASCLK polarity are programmable. The optional SASIF 2 has an additional pin called DSS_AVAIL. This signal can be used to tristate the SASCLK2 and SASTXD2 signals.

### 2.2.15 Real Time Clock (RTC)

The CX06835 includes a battery backup real time clock. The RTC will automatically maintain the proper date and time for 32 years. Leap year compensation is included. A 32.768 kHz or 65.536 kHz crystal is required by the RTC.

### 2.2.16 Tone Generator (ALT_TONE)

The CX06835 provides a programmable tone generator output. The frequency of the tone generator is programmable from 400 Hz to 4 kHz. By using a PWM programmable high frequency as a modulation frequency, the output level can be made programmable.

### 2.2.17 Watchdog Timer

The Programmable Watchdog Timer is intended to guard against firmware lockup on the part of either executive-controlled background tasks or interrupt-driven tasks, and can only be enabled by a sequence of events under control of the Watchdog Control Logic. Once the Watchdog Timer has been enabled, it can not be disabled unless a system reset occurs.

### 2.2.18 Reset and Power Control

The RESETn I/O pin provides an internally generated reset output to external circuits, or it can accept an externally generated reset signal. This reset signal will not reset the RTC. Separate RTC battery power inputs are provided for battery-backup functions. A BATRSTn pin is provided, which resets the RTC circuits and other SCC circuits.

### 2.2.19 Power Up/Down Control

Power Up/Down detection is provided internally. The threshold voltages are:

- Power Up detection level = 2.83V to 2.95V.

An internally generated power down signal controls internal switching between primary and battery power. This control signal is also provided as an output on the PWRDWNn pin. An externally generated power down detector (optional) can be provided as an input on the PWRDWNn pin by setting the INTPWRDWNEn pin.

### 2.2.20 Stand-by and Sleep Modes

Two power saving modes are provided to reduce the power consumption. In stand-by mode, the CPU is functional, but the modem clock is turned off to save power. When this occurs, the modem may be activated by software under different conditions. In sleep mode, the clock is cut off from both the modem and the CPU to increase the power savings.

The system can be activated by paper insertion, key pressing events, and telephone ring detection.

### 2.2.21 Embedded Modem DSP

The embedded modem DSP is a synchronous 14,400 bps half-duplex modem with error detection and DTMF generation/reception. It provides data transmission/reception from regular PSTN lines, PBX, or private lines. The modem can operate at any standard V.29 data speed up to 14,400 bps as well as in V.21 and V.23 modes. The modem is designed for use in Group 3 facsimile machines. It satisfies the requirements specified in ITU-T recommendations V.29, V.27ter, V.21 Channel 2, and T.4 , and meets the signaling requirements of T.30. It also performs HDLC framing according to T.30 at all speeds.

### 2.2.22 Software and Firmware Support Features

Available software and embedded firmware provides the following:

- Modem support for speeds up to 14,400 bps.
- ECM under conditional assembly.
- DRAM memory support under conditional assembly.
- MH, MR and MMR support.
- Page memory receiving.
- 5 ms minimum scan line time.
- Conditional Error Diffusion or Dither table (8x8) support.
- Dark Level Correction support.
- Single motor support.
- 28-key operator panel support.
- Call progress support for Europe and U.S.A.
- Monochrome inkjet print engine support.

**SCE214VS (IC5) Terminal descriptions**

| Pin No. | Pin List | I/O | Input Type | Output Type | Pin Description |
|---|---|---|---|---|---|
| 1 | VDDPLL | — | — | — | PLL Power |
| 2 | VSSPLL | — | — | — | PLL GND |
| 3 | ROMCSn | — | — | 13Xs | — |
| 4 | SYNC/GPO[20] | O | — | 13Xs | — |
| 5 | WRn | O | — | 13Xs | — |
| 6 | RDn | O | — | 13Xs | — |
| 7 | DEBUGn | I | Hu | — | — |
| 8 | TSTCLK | O | — | 13Xs | — |
| 9 | VSS | — | — | — | Digital GND |
| 10 | SXIN | I | Osc0 | — | — |
| 11 | SXOUT | O | — | Osc0 | — |
| 12 | OPO[0]/GPO[8]/SMPWRCTRL | O | — | 13Xs | — |
| 13 | OPO[1]/GPO[9]/PMPWRCTRL | O | — | 13Xs | — |
| 14 | OPO[2]/GPO[10]/RINGER | OZ | — | 13Xs | — |
| 15 | OPO[3]/GPO[11] | O | — | 13Xs | — |
| 16 | OPO[4]/GPO[12]/SSTXD1 | O | — | 13Xs | — |
| 17 | OPO[5]/GPO[13] | O | — | 13Xs | — |
| 18 | OPO[6]/GPO[14] | O | — | 13Xs | — |
| 19 | OPI[0]/GPIO[21]/SSRXD1 | I/O | Hu | 13Xs | — |
| 20 | OPI[1]/GPIO[22]/SSSTAT1 | I/O | Hu | 13Xs | — |
| 21 | OPI[2]/GPIO[23]/SSCLK1 | I/O | Hu | 13Xs | — |
| 22 | OPI[3]/GPIO[24] | I/O | Hu | 13Xs | — |
| 23 | LCDCS/GPO[17] | O | — | 1XC | — |
| 24 | VDD | — | — | — | Digital Power |
| 25 | RASn | O | — | 13Xs | — |
| 26 | CAS[0]n | O | — | 13Xs | — |
| 27 | DWRn | O | — | 13Xs | — |
| 28 | VBAT | — | — | — | RTC Battery Power |
| 29 | XIN | I | Osc1 | — | — |
| 30 | XOUT | O | — | Osc1 | — |
| 31 | WRPROTn | O | — | 1XC | — |
| 32 | TEST[1] | I | Hd | — | — |
| 33 | TEST[0] | I | Hd | — | — |
| 34 | BATRTSn | I | H | — | — |
| 35 | INTPWRDWNEn | I | H | — | — |
| 36 | PWRDWNn | I/O | H | 13Xs | — |
| 37 | N.C. | — | — | — | — |
| 38 | ADGA | — | VADG | — | PADC Analog GND |
| 39 | VREFn/CLREF | I | VR- | — | PADC |
| 40 | VIN | I | VA | — | PADC |
| 41 | ADGA | — | VADG | — | PADC Analog GND |
| 42 | ADVA | — | VADV | — | PADC Analog Power |
| 43 | ADXG | — | VXG | — | PADC |
| 44 | VREFp | I | VR | — | PADC |
| 45 | VSS | — | — | — | VSS Digital GND |
| 46 | IVREFn | O | — | VR- | PADC |
| 47 | IVREFp | O | — | VR+ | PADC |
| 48 | VDD | — | — | — | Digital Power |
| 49 | THADI | I | Analog | — | TADC |
| 50 | VSS | — | — | — | Digital GND |
| 51 | GPIO[17]/DSPIRQn | I/O | Hu | 13Xs | — |
| 52 | GPIO[16]/IRQ[8] | I/O | Hu | 13Xs | — |
| 53 | GPIO[15]/CS[5]n | I/O | Hu | 13Xs | — |
| 54 | GPIO[13]/CS[3]n | I/O | Hu | 13Xs | — |
| 55 | GPIO[37]/IRQ15n/DSPCSn | I | Hu | 13Xs | — |
| 56 | GPIO[4]/CPCIN/TPHPWRCTRL/DMAREG | I/O | Hu | 13Xs | — |
| 57 | STRB[0] | O | — | 1XC | — |
| 58 | STRB[1] | O | — | 1XC | — |
| 59 | STRB[2] | O | — | 1XC | — |
| 60 | STRB[3] | O | — | 1XC | — |
| 61 | PLAT | O | — | 3XC | — |
| 62 | PDAT | O | — | 2XC | — |

**SCE214VS (IC5) Terminal descriptions**

| Pin No. | Pin List | I/O | Input Type | Output Type | Pin Description |
|---|---|---|---|---|---|
| 63 | PCLK/DMAACK | O | — | 3XC | — |
| 64 | VDD | — | — | — | Digital Power |
| 65 | GPIO[11]/BE/SERINP/SR4IN | I/O | Hu | 13Xs | — |
| 66 | GPIO[19]/RDY/SEROUT | I/O | Hu | 13Xs | — |
| 67 | START | O | — | 2XC | — |
| 68 | CLK1n/GPO[25] | O | — | 13Xs | — |
| 69 | CLK2/GPO[24] | O | — | 13Xs | — |
| 70 | GND | — | — | — | IA GND |
| 71 | MCLK | ID | — | — | Main Clock from DSP |
| 72 | CTRLI | ID | d | — | Control Data from DSP |
| 73 | TESTC | ID | d | — | IA Test |
| 74 | SOUT | OD | — | T | Serial Data to DSP |
| 75 | SIN | ID | d | — | Serial Data to DSP |
| 76 | FSYNC | I/OD | d | — | Frame Sync Signal (IA) |
| 77 | POR | IA | d | — | Hardware Reset |
| 78 | GND | — | — | — | IA GND |
| 79 | LINE_INP | IA | — | — | Analog Input to Line Pre-Amp. |
| 80 | MIC_INP | IA | — | — | Positive differential Analog Input to Microphone Pre-Amp. |
| 81 | MIC_INM | IA | — | — | Negative differential Analog Input to Microphone Pre-Amp. |
| 82 | MIC_BIAS | OA | — | — | 2.2 V Nominal DC Bias Source for Electret Microphone |
| 83 | BG | OA | — | — | Analog reference Voltage Output |
| 84 | VC | OA | — | — | Analog Ground Bias Output |
| 85 | AVDD | PWR | — | — | IA Analog Power |
| 86 | GND | — | — | — | IA GND |
| 87 | LINE_OUTP | OA | — | — | Line Driver Output |
| 88 | SPKR_OUTP | OA | — | — | Positive Speaker Driver Output |
| 89 | SPKR_OUTM | OA | — | — | Negative Speaker Driver Output |
| 90 | DVDD | PWD | — | — | IA Digital Power |
| 91 | MODE_0 | ID | u | — | Connect to VSS (IA Mode Selection) |
| 92 | ICLK | I/OD | — | — | IA Bit Clock Input/Output |
| 93 | VSS | — | — | — | VSS Digital GND |
| 94 | FCSn[1]/VIDCTL[0]/GPO[23] | O | — | 13Xs | — |
| 95 | IARESET | O | — | 13Xs | DSP to EXTIA POR |
| 96 | IACLK | O | — | 13Xs | DSP to EXTIA MCLK |
| 97 | VDD | — | — | — | Digital Power |
| 98 | IA1CLK | I | H | — | DSP from EXTIA ICLK |
| 99 | SR3IN/DSPIRQn | I | H | — | DSP from primary EXTIA SOUT/EXT. Modem IRQn |
| 100 | SR4OUT | O | — | 13Xs | DSP to primary EXTIA SIN |
| 101 | SR1IO | O | — | 13Xs | DSP to EXTIA CTRL1 |
| 102 | SA1CLK | I | H | — | DSP from EXTIA FSYNC |
| 103 | GPIO[7]/SSRXD2/SASRXD2 | I/O | Hu | 13Xs | — |
| 104 | GPIO[6]/SSTXD2/SASTXD2 | I/O | Hu | 13Xs | — |
| 105 | GPIO[5]/SSCLK2/SASCLK2 | I/O | Hu | 13Xs | — |
| 106 | GPIO[10]/SSSTAT2/DSS_AVAIL | I/O | Hu | 13Xs | — |
| 107 | VSS | — | — | — | Digital GND |
| 108 | RESETn | I/O | Hu | 2XC | — |
| 109 | GPIO[3]/SASCLK | I/O | Hu | 13Xs | — |
| 110 | GPIO[2]/SASRXD | I/O | Hu | 13Xs | — |
| 111 | GPIO[1]/SASTXD | I/O | Hu | 13Xs | — |
| 112 | GPIO[9]/FRDn | I/O | Hu | 13Xs | — |
| 113 | GPIO[8]/FWRn | I/O | Hu | 13Xs | — |
| 114 | A[0] | I/O | Tu | 13Xs | CPU Address Bus |
| 115 | A[1] | I/O | Tu | 13Xs | CPU Address Bus |
| 116 | A[2] | I/O | Tu | 13Xs | CPU Address Bus |
| 117 | A[3] | I/O | Tu | 13Xs | CPU Address Bus |
| 118 | A[4] | I/O | Tu | 13Xs | CPU Address Bus |
| 119 | VDD | — | — | — | Digital power |
| 120 | A[5] | I/O | Tu | 13Xs | CPU Address Bus |
| 121 | A[6] | I/O | Tu | 13Xs | CPU Address Bus |
| 122 | A[7] | I/O | Tu | 13Xs | CPU Address Bus |
| 123 | A[8] | I/O | Tu | 13Xs | CPU Address Bus |
| 124 | A[9] | I/O | Tu | 13Xs | CPU Address Bus |

**SCE214VS (IC5) Terminal descriptions**

| Pin No. | Pin List | I/O | Input Type | Output Type | Pin Description |
|---|---|---|---|---|---|
| 125 | A[10] | I/O | Tu | 13Xs | CPU Address Bus |
| 126 | A[11] | I/O | Tu | 13Xs | CPU Address Bus |
| 127 | A[12] | I/O | Tu | 13Xs | CPU Address Bus |
| 128 | A[13] | I/O | Tu | 13Xs | CPU Address Bus |
| 129 | A[14] | I/O | Tu | 13Xs | CPU Address Bus |
| 130 | A[15] | I/O | Tu | 13Xs | CPU Address Bus |
| 131 | A[16] | I/O | Tu | 13Xs | CPU Address Bus |
| 132 | VDD | — | — | — | Digital Power |
| 133 | VSS | — | — | — | Digital GND |
| 134 | A[17] | I/O | Tu | 13Xs | CPU Address Bus |
| 135 | A[18] | I/O | Tu | 13Xs | CPU Address Bus |
| 136 | A[19] | I/O | Tu | 13Xs | CPU Address Bus |
| 137 | A[20] | I/O | Tu | 13Xs | CPU Address Bus |
| 138 | A[21]/EYECLK | I/O | Tu | 13Xs | CPU Address Bus |
| 139 | A[22]/EYESYNC | I/O | Tu | 13Xs | CPU Address Bus |
| 140 | A[23]/EYEXY | I/O | Tu | 13Xs | CPU Address Bus |
| 141 | D[0] | I/O | Tu | 13Xs | CPU Data Bus |
| 142 | D[1] | I/O | Tu | 13Xs | CPU Data Bus |
| 143 | D[2] | I/O | Tu | 13Xs | CPU Data Bus |
| 144 | D[3] | I/O | Tu | 13Xs | CPU Data Bus |
| 145 | D[4] | I/O | Tu | 13Xs | CPU Data Bus |
| 146 | D[5] | I/O | Tu | 13Xs | CPU Data Bus |
| 147 | D[6] | I/O | Tu | 13Xs | CPU Data Bus |
| 148 | D[7] | I/O | Tu | 13Xs | CPU Data Bus |
| 149 | GPIO[20]/ALTTONE | I/O | Hu | 13Xs | — |
| 150 | GPIO[26] | I/O | Hu | 13Xs | — |
| 151 | GPIO[27] | I/O | Hu | 13Xs | — |
| 152 | GPIO[28] | I/O | Hu | 13Xs | — |
| 153 | GPO[26] | O | — | 13Xs | — |
| 154 | GPO[27] | O | — | 13Xs | — |
| 155 | GPO[28] | O | — | 13Xs | — |
| 156 | GPO[29] | O | — | 13Xs | — |
| 157 | GPO[30]/SR3OUT | O | — | 13Xs | — |
| 158 | GPIO[29] | I/O | Hu | 13Xs | — |
| 159 | GPIO[31] | I/O | Hu | 13Xs | — |
| 160 | GPIO[32] | I/O | Hu | 13Xs | — |
| 161 | VDD | — | — | — | Digital power |
| 162 | GPIO[34] | I/O | Hu | 13Xs | — |
| 163 | GPIO[35] | I/O | Hu | 13Xs | — |
| 164 | GPIO[36] | I/O | Hu | 13Xs | — |
| 165 | Vss | — | — | — | Digital GND |
| 166 | VDD | — | — | — | Digital Power |
| 167 | PM[0]/GPO[0] | O | — | 13Xs | — |
| 168 | PM[1]/GPO[1] | O | — | 13Xs | — |
| 169 | PM[2]/GPO[2] | O | — | 13Xs | — |
| 170 | PM[3]/GPO[3] | O | — | 13Xs | — |
| 171 | SM[0]/GPO[4] | O | — | 13Xs | — |
| 172 | SM[1]/GPO[5] | O | — | 13Xs | — |
| 173 | SM[2]/GPO[6] | O | — | 13Xs | — |
| 174 | SM[3]/GPO[7] | O | — | 13Xs | — |
| 175 | REGDMA/GPO[18]/CLKDIV[0] | I/O | T | 13Xs | — |
| 176 | WAITn/GPO[19]/CLKDIV[1] | I/O | T | 13Xs | — |

### 2.3. Panel control block

The following controls are performed by the SCE214VS.

- Operation panel key scanning
- Operation panel LCD display

### 2.4. Mechanism/recording control block

- Recording control block diagram

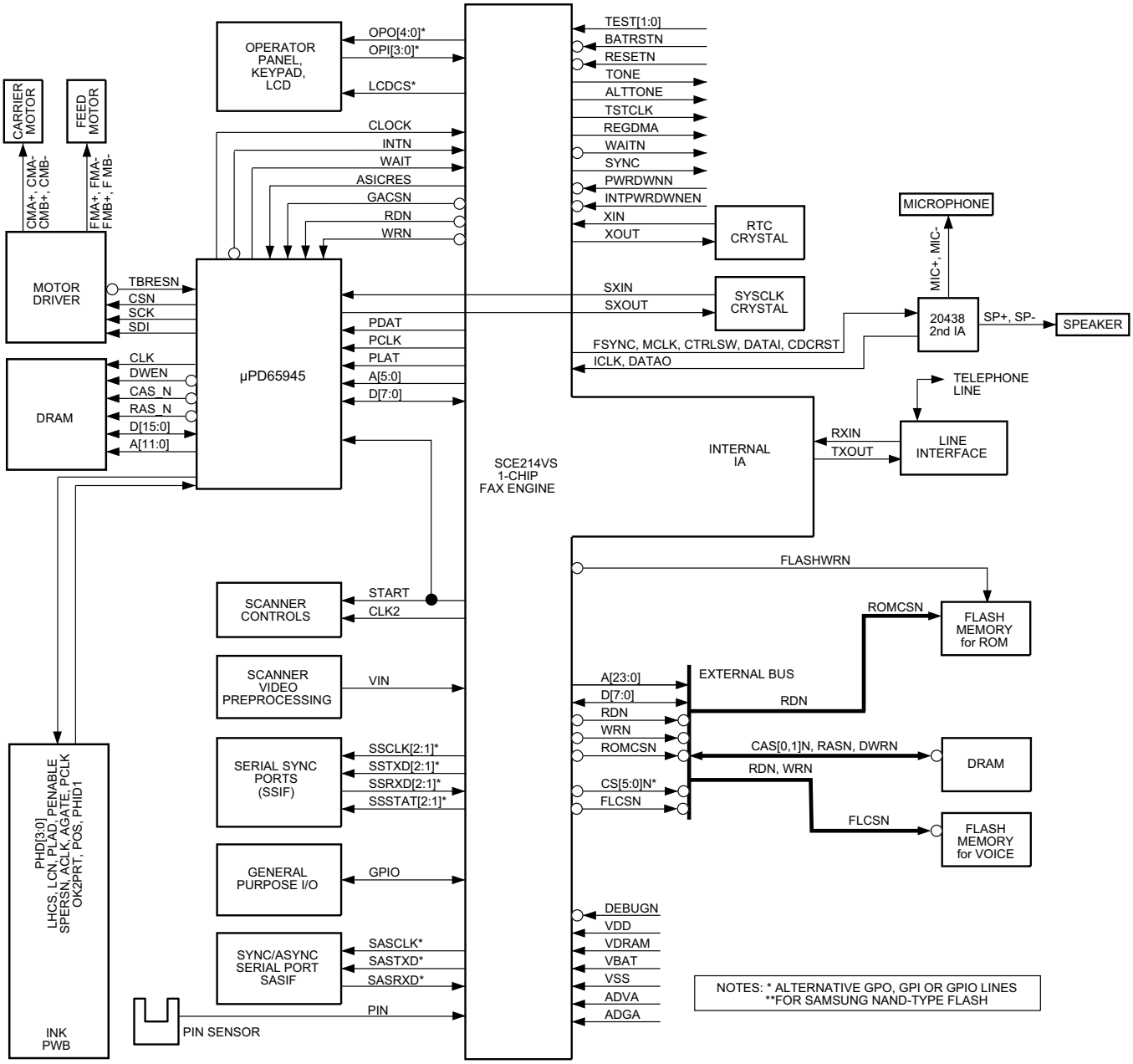



**Fig. 3**

## 2.5. Modem block (CX06835)

### 2.5.1 Facsimile Modem

The modem can operate at 14400, 12000, 9600, 7200, 4800, 2400, or 300 bps, and can perform HDLC framing per T.30 at all rates. A programmable DTMF detector, three programmable tone detectors, V.21 Channel 2 FSK 7E flag detector, Caller ID demodulator and ring detector are provided.

### 2.5.2 Voice and Audio Codecs

The voice coder/decoder (codec) compresses voice at an average rate of 2.9 kbps which provides 24 minutes of stored voice messages in 4 Mbits of memory. But a part of memory is used for other uses. So the total recording time is shortened at about 20 minutes. This voice codec allows the host controller to efficiently store and playback digital incoming messages (ICMs), outgoing messages (OGMs).
The ADPCM audio codec compresses audio signals (music/voice) at 32 kbps or 24 kbps and the PCM audio codec records audio signals at 128 kbps or 64 kbps for highest fidelity coding and reproduction.
Selectable error correction coding allows storage in audio grade RAMs (ARAMs). Echo cancellation techniques employed during playback allow DTMF tone and Type II Caller ID CAS detection during voice/audio codec operation to support user selectable features. The coder can record messages from the PIA or SIA. The decoder can playback messages to the PIA or both the PIA and SIA. Dual/signal tone transmission is available when the decoder is disabled.

### 2.5.3 V.23 Full-duplex Modem and Caller ID

Both full-duplex transmit and receive (with asymmetric 1200/75 bps connection) and half-duplex (1200 bps) asynchronous V.23 are supported, as will as both serial and parallel interfaces to the modem. The V.23 algorithm includes an optional, programmable. receive compromise equalizer which is active in both V.23 and Caller ID (V.23 Receive only) modes.
Common applications for V.23 include France's Minitel and Japan's Lowest Cost Routing.

### 2.5.4 Features

- Group 3 facsimile transmission/reception
  - ITU-T V.17 and V.33
  - ITU-T V.29, V.27 ter, T.30, V.21 Channel 2, T.4
  - ITU-T V.17 and V.27 ter short train
  - HDLC framing at all speeds
  - Receive dynamic range: 0 dBm to -43 dBm
  - Automatic adaptive equalization
  - Fixed and programmable digital compromise equalization
  - DTMF detect and tone detect
  - ITU-T V.21 Channel 2 FSK 7E Flag Detect
  - Ring detector
  - Programmable transmits level
  - Programmable single/dual tone transmission
- Voice codec
  - 24 minutes of voice storage per 4 Mbit memory
  - Near toll quality voice recording and playback
  - Programmable AGCs
  - Programmable line/microphone input and line/speaker output filters
  - Error correction coding allows ARAM usage
  - DTMF detect, tone detect, and tone transmit
  - Type II Caller ID CAS detection
  - Pitch synchronized fast and slow playback
  - Near-end echo cancellation
- ADPCM Audio codec
  - High fidelity recording and playback of audio signals
  - 32 kbps and 24 kbps
  - Programmable AGCs
  - Programmable line/microphone input and line/speaker output filters
  - DTMF detect, tone detect, and tone transmit
  - Type II Caller ID CAS detection
  - Near-end echo cancellation
- PCM audio codec
  - 128 kbps and 64 kbps
  - DTMF detect and tone detect
  - Type II Caller ID CAS detection
  - Near-end echo cancellation
- V.23 and Type I Caller ID
  - Full-duplex modes:
    TX = 75 bps. RX = 1200 bps
    TX = 1200 bps. RX = 75 bps
  - Half-duplex mode:
    TX = RX = 1200 bps
  - Serial and parallel data modes
  - Programmable parallel data mode
  - 5, 6, 7, or 8 data bits
  - 1 or 2 Stop bits
  - Mark, Space, Even, or Odd Parity
  - Break function
  - Transmitter squelch
  - Compromise equalizer
- 3.3V operation

### 2.5.5 Integrated Analog Control Resisters for 20438

The 20438 IA can be used as a Primary Integrated Analog (PIA) codec or as a Secondary Integrated Analog (SIA) codec, depending on the signal connection with the SCE Controller ASIC device. In the SCE100 product, both the PIA and the SIA are packaged external to the SCE Controller device, whereas in the SCE214VS, the PIA is packaged with the SCE214VS Controller and the SIA is external.

The 20438 IA provides gain, filtering, internal analog switching, and an internally sourced microphone bias output. The IA is controlled by three control registers and an address register located in internal RAM space which are accessed via the modem interface memory. These registers provide individual controls for the IA's inputs, outputs, gain settings, and switching.

The registers are located in internal DSP RAM. Each bit of each 8-bit IA control register has exactly the same meaning for the PIA and the SIA. The LSB of each 16-bit address contents is used to control the PIA. The MSB of each 16-bit address contents is used to control the SIA.

The following table the PIA/SIA control register RAM access code.

| Register | SBRAMx | BRx | Crx | IOx | AREXx | ADDx | PIA Reg* | SIA Reg* |
|---|---|---|---|---|---|---|---|---|
| IACR1 | 0 | 0 | 0 | 0 | 0 | D0 | 0 | 1 |
| IACR2 | 0 | 0 | 0 | 0 | 0 | D4 | 0 | 1 |
| IACR3 | 0 | 0 | 0 | 0 | 0 | D5 | 0 | 1 |
| IAADD | 0 | 0 | 0 | 0 | 0 | CE | 0, 1 | 0, 1 |
| NOTES: *Registers to use when x=1. When x=2, add 10h. | | | | | | | | |

- For changes made to IACR1 to be effective, the host must write to IAADD with a value of 0002h.
- For changes made to IACR2 to be effective, the host must write to IAADD with a value of 0006h.
- For changes made to IACR3 to be effective, the host must write to IAADD with a value of 0007h.

**Configuration default values are shown below.**

| DEFAULT VALUE | | | |
|---|---|---|---|
| **CONFIGURATION** | **IACR1** | **IACR2** | **IACR3** |
| V.17/V.33 | 1D9Eh | 0008h | 0000h |
| V.29 | 1D9Eh | 0008h | 0000h |
| V.27ter | 1D9Eh | 0008h | 0000h |
| V.21 Ch. 2 | 1D9Eh | 0008h | 0000h |
| V.23/Caller ID | 1D9Eh | 0008h | 0000h |
| Tone Transmit/Detect | 1D9Eh | 0008h | 0000h |
| Voice/Audio Codec | 0D16h | 0008h | 0000h |
| Speakerphone | 0D16h | 0008h | 0000h |

The following signal flow block diagram is for a signal IA and it applies to both PIA and SIA.

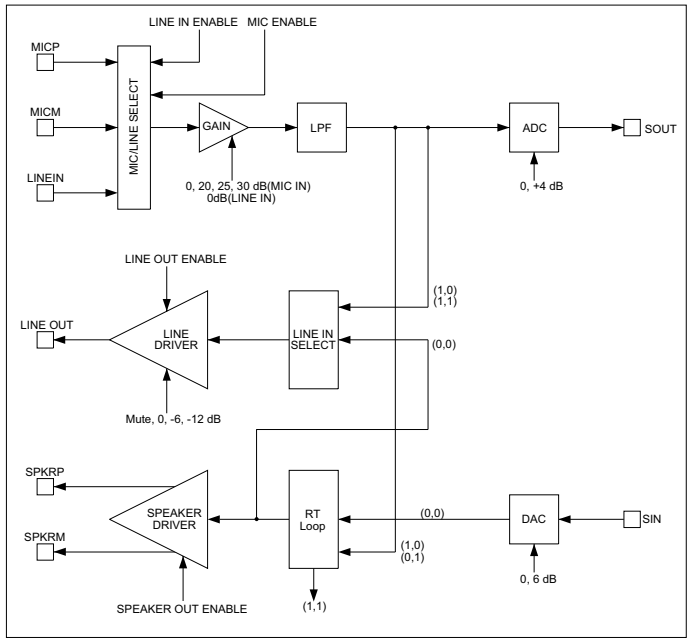



**Fig. 4 PIA/SIA Signal Flow Control**

## 2.6. IC4 (μPD65945) Hardware description

### 2.6.1 Entire Mechanism Sequence Controller

Depending on data processing of the entire ASIC, this controller manages the following automatic drive sequences:

- Power-on/reset sequence
- CAP position check sequence
- CAP position movement sequence 1
- CAP position movement sequence 2
- Cartridge replacement sequence 1 (movement to replacement position)
- Cartridge replacement sequence 2 (return to the CAP position)
- Print sequence
- Next page print sequence
- Head failure check sequence
- Cartridge ID check sequence

When Fax Engine sends a motor drive command, this controller activates the motor control circuit after automatic drive sequences to control the motor.

### 2.6.2 Serial Data Receiving Circuit

This circuit stores received serial print data in the input buffer. It receives data (PDAT) using a 16-bit shift register when the clock (PCLK) is activated and then writes the data to the buffer by every 16 dots (2 bytes).

Input data is fixed to 216 bytes (1728 dots) per line, and the maximum serial transfer frequency is 3.3 MHz.

When Fax Engine sends a page break command (Page End register = 1), this circuit adds Flag Word (data indicating the last line of a page) after to the last piece of data.

### 2.6.3 Input Buffer

This buffer uses 384 kWord of memory space for receiving serial data. It is based on a FIFO system and equipped with an address counter.

This buffer also has a determining circuit to show the FIFO status (FULL, NEARFULL or EMPTY).

### 2.6.4 Enlargement/Reduction/Resolution Conversion Circuit

This circuit reads data from the input buffer and enlarges or reduces image data dot by dot. Based on SHARP's conversion algorithm (oversampling technique), this process has made it possible to enlarge/reduce the length and width individually with the following register setting: horizontal scanning direction KH (15:0) and vertical scanning direction KV (16:0).

Along the horizontal scanning direction, this circuit removes right and left dots after enlargement, and fills right and left space with white dots after reduction to send the center of images (centering).

After conversion, there are 4800 dots (fixed value) along the horizontal scanning direction. 16 extra white dots are inserted at the right and left edges for 16-dot long odd and even nozzles of the cartridge head. In total, 4832 dots are sent per line.

To make voids (margins) at the right and left edges, this circuit masks dots on both sides individually (in white) according to the register setting from Fax Engine (maximum dots: 255 on the left, and 511 on the right). After converted in both scanning directions, image data is stored in the print buffer. When converting a swath of data, this circuit sends a notification to the entire mechanism sequence controller. It identifies Flag Word (indicating a page break) on each line. If some sections have less than a swath (208 lines) of data on the last page, this circuit fills them with white dots.

In the ink save mode, output data is equivalent to 300 dpi of the vertical scanning.

### 2.6.5 Split Printing/White Skip Measuring Circuit

This circuit monitors data which is converted by the enlargement/reduction/resolution conversion circuit to be written to the print buffer to calculate the number of print dots. 4800 dots for horizontal scanning are divided into 8 areas (600 dots per each) and the calculation is made for each area.

This circuit sends the split printing status when detecting an area with 62400 (600 x 208 divided by 2) dots or more, and sends the white skip status if there are no dots in any areas.

The status is sent to the enlargement/reduction/resolution conversion circuit and then reflected in Flag Word. This circuit checks Flag Word when starting the swath printing, and performs the split printing or white skip operation accordingly using Ink controller or the entire mechanism sequence controller.

### 2.6.6 Print Buffer

This buffer stores image data which is converted to 600 dpi x 600 dpi by the enlargement/reduction/resolution conversion circuit. This buffer sends a notification to notifies the entire mechanism sequence controller when detecting a swath (208 lines) of data. When the entire mechanism sequence controller sends a release command, this buffer frees memory space for a swath of image data.

### 2.6.7 Ink controller

When the entire mechanism sequence controller sends a print start command, this controller controls Ink by reading data dot by dot from the print buffer and converting the length and width according to the head alignment.

When receiving a split printing command, this controller masks odd and even slice data in white to send to the first and second paths respectively.

Also, it counts dots when sending data to Ink Control to calculate the number of dots per swath.

### 2.6.8 Carriage Motor Control Circuit

This circuit drives the carriage motor by controlling Motor driver according to the motor acceleration/deceleration table. The carriage motor drives by steps specified by the entire mechanism sequence controller in the order of "Still", "Acceleration", "Constant", and "Deceleration".

Moreover, the motor drives by specified steps at a constant speed when the home position detection sensor is switched ON/OFF, and then decelerates to stop. The carriage is stopped at a fixed distance after the sensor is switched, which has made it possible to identify its position at the time of initialization.

### 2.6.9 Feeder Motor Control Circuit

This circuit drives the feeder motor by controlling Motor driver according to the motor acceleration/deceleration table. The feeder motor drives by steps specified by the entire mechanism sequence controller in the order of "Still", "Acceleration", "Constant", and "Deceleration".

Moreover, the motor drives by specified steps at a constant speed when the recording paper detection sensor is switched ON/OFF, and then decelerates to stop. The motor is stopped at a fixed distance after the sensor is switched, which has made it possible to locate the beginning of the recording paper.

### 2.6.10 Motor Driver Interface Circuit

This circuit receives control signals from the carriage motor control circuit and the feed motor control circuit, and converts them to serial signals to send to the motor driver IC (Motor driver).

Using its head power circuit, this circuit controls the head power ON/OFF bit in serial signals (converts to serial signals).

### 2.6.11 Fax Engine Bus Interface

This interface has a bridging function for connecting the external bus of Fax Engine LSI and the internal bus of ASIC. Due to the system clock condition, 1WAIT or more must be set to activate Fax Engine.

### 2.6.12 Interrupt Controller

This controller logs major causes of interruption in the ASIC and sends interrupt signals according to the interrupt status of the Fax Engine firmware (allowed or prohibited). The causes can be cleared or stored. External interrupt to Fax Engine is generated at L active level.

### 2.6.13 Memory Access Arbiter

This arbiter arbitrates memory access from each buffer. There are 7 access channels. The arbitration is controlled by priority to maintain the data transfer rate of the data output channel to the head.

After arbitration, this arbiter notifies the SDRAM controller of memory addresses and access types and then waits until memory access is completed.

### 2.6.14 SDRAM Controller

This controller accesses the memory by controlling the read cycle, write cycle, and AUTO refresh cycle of a 16-bit wide 16Mbit Synchronous DRAM.

A refresh cycle is automatically inserted by distributed refresh executed every 15.6μs (maximum), and when initialization sequence is performed after reset.

### 2.6.15 Sensor Detection Circuit

For home position sensor input and paper detection sensor input, this circuit eliminates noises such as chattering. The detection method is based on multiple sampling (sequential matching). The sampling clock is 1.008 MHz and detection time in the register setting should be approximately between 2μs ~ 65 ms, and can be set for the rising edge and the falling edge individually.

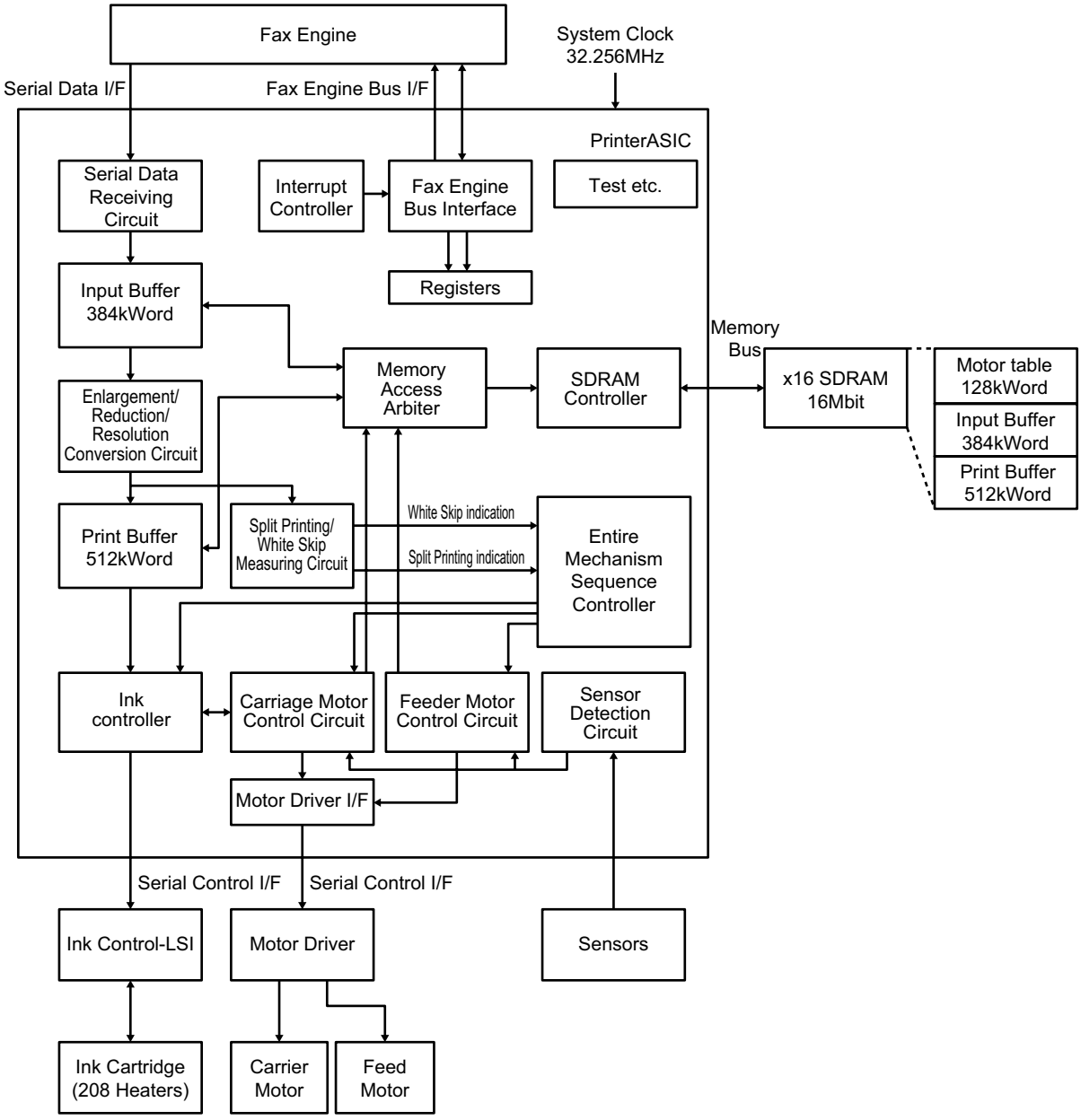



**Fig. 5**

**μPD65945 (IC4) Pin descriptions**

| SYMBOL | PIN NO. | I/O | DESCRIPTION | PAD CELL. | NOTE |
|---|---|---|---|---|---|
| **System Operation Signals (3 pin)** | | | | | |
| XIN | 75 | I | X'tal in | OSI1 | 32.256 MHz |
| XOUT | 74 | O | X'tal out | OSO1 | |
| ASICRES | 70 | I | Reset<br>L: Operate<br>H: Reset | FIS1 | Schmitt |

| SYMBOL | PIN NO. | I/O | DESCRIPTION | PAD CELL. | NOTE |
|---|---|---|---|---|---|
| **Fax Engine Bus Interface (21 pin)** | | | | | |
| SYSCLK | 83 | O | System clock for Fax Engine | FE04 | 32.256 MHz Output |
| A0 | 104 | I | Address bus<br>L: Logic 0<br>H: Logic 1 | FI01 | |
| A1 | 103 | I | | FI01 | |
| A2 | 102 | I | | FI01 | |
| A3 | 101 | I | | FI01 | |
| A4 | 100 | I | | FI01 | |
| A5 | 99 | I | | FI01 | |
| D0 | 95 | I/O | Data bus<br>L: Logic 0<br>H: Logic 1 | B00C | |
| D1 | 94 | I/O | | B00C | |
| D2 | 93 | I/O | | B00C | |
| D3 | 92 | I/O | | B00C | |
| D4 | 91 | I/O | | B00C | |
| D5 | 90 | I/O | | B00C | |
| D6 | 89 | I/O | | B00C | |
| D7 | 88 | I/O | | B00C | |
| CS_N | 68 | I | Chip select<br>L: Select<br>H: Deselect | FI01 | Schmitt |
| RD_N | 106 | I | Read strobe<br>L: Read | FI01 | Schmitt |
| WR_N | 107 | I | Write strobe<br>L: Write | FI01 | Schmitt |
| INT_N | 67 | O | Interrupt<br>L: Interrupt<br>Hi-Z: No Interrupt | EXTH | Open Drain |
| RDY | 61 | O | External Wait<br>L: Wait<br>Hi-Z: Ready | EXTH | Open Drain |
| SCANSYNC | 60 | I | Scanner Motor Sync. Signal<br>Rise: Sync. | FISI | Schmitt |

| SYMBOL | PIN NO. | I/O | DESCRIPTION | PAD CELL. | NOTE |
|---|---|---|---|---|---|
| **Motor Driver Control Interfaces (4 pin)** | | | | | |
| SCS_N | 141 | O | Chip Select | FO09 | |
| SCLK | 142 | O | Clock | FO09 | |
| SDAT | 140 | O | Data | FO09 | |
| SRST_N | 133 | I | Reset | FISI | Schmitt |

| SYMBOL | PIN NO. | I/O | DESCRIPTION | PAD CELL. | NOTE |
|---|---|---|---|---|---|
| **Ink Control Signals (14 pin)** | | | | | |
| SFRES_N | 127 | O | Reset | FE04 | |
| ACLK | 130 | O | A-Line Counter Clock | FE04 | |
| AGATE | 129 | O | Reset A-Line to Low | FE04 | |
| PLCLK | 128 | O | Shift Clock for P-Line Data | FE04 | |
| PDATA0 | 120 | O | Serial Data Output#0 | FE04 | |
| PDATA1 | 119 | O | Serial Data Output#1 | FE04 | |
| PDATA2 | 118 | O | Serial Data Output#2 | FE04 | |
| PDATA3 | 117 | O | Serial Data Output#3 | FE04 | |
| PLOAD | 113 | O | Latches into Holding Reg. | FE04 | |
| PENABLE | 114 | O | Enables P-Line Output Drive | FE04 | |
| LCN | 111 | O | Latch Control Register | FE04 | |
| LHCS | 112 | O | Latch Heater States | FE04 | |
| OK2PRT | 125 | I | P-Line Driver Status | FISI | Schmitt |
| PHID | 126 | I | Print Head ID Compare Status | FISI | Schmitt |

**μPD65945 (IC4) Pin descriptions**

| SYMBOL | PIN NO. | I/O | DESCRIPTION | PAD CELL. | NOTE |
|---|---|---|---|---|---|
| **Sensor Signals (2 pin)** | | | | | |
| POS | 124 | I | Home position Sensor Input<br>L: No Position<br>H: Home Position | FIS1 | Schmitt |
| PIN_N | 47 | I | Paper-in Sensor Input<br>L: Paper Exist<br>H: No Paper | FIS1 | Schmitt |

| SYMBOL | PIN NO. | I/O | DESCRIPTION | PAD CELL. | NOTE |
|---|---|---|---|---|---|
| **Test Pins (10 pin)** | | | | | |
| SCK | 136 | I | Scan clock | - | |
| AMC | 138 | I | | - | |
| SMC | 135 | I | Scan mode control | - | |
| SIN | 137 | I | Scan in | FDS1 | |
| SOT | 139 | O | Scan out | FO09 | |
| TM0 | 51 | I | Test mode select<br>LLL: Normal operation<br>Else: Test/Debug operations | FDS1 | Schmitt+Pull Down |
| TM1 | 52 | I | | FDS1 | Schmitt+Pull Down |
| TM2 | 53 | I | | FDS1 | Schmitt+Pull Down |
| TEST | 50 | I | Test mode enable<br>L: Normal operation<br>H: Test mode | FDS1 | Schmitt+Pull Down |
| DEBUG | 54 | O | Debug output | FO09 | |

| SYMBOL | PIN NO. | I/O | DESCRIPTION | PAD CELL. | NOTE |
|---|---|---|---|---|---|
| **Power/Ground Pins (55 pin)** | | | | | |
| VDD | 1,10,25,<br>36,56,57,<br>73,76,79,<br>80,86,87,<br>98,108,<br>121,134 | - | Power +3.3V | - | |
| GND | 11,20,21,<br>23,24,37,<br>3845,46,<br>48,49,55,<br>58,59,62,<br>63,69,71,<br>72,77,78,<br>81,82,84,<br>85,96,97,<br>105,109,<br>110,115,<br>116,122,<br>123,131,<br>132,143,<br>144 | - | Ground | - | |

| SYMBOL | PIN NO. | I/O | DESCRIPTION | PAD CELL. | NOTE |
|---|---|---|---|---|---|
| **Serial Data Interface (3 pin)** | | | | | |
| PCLK | 64 | I | Serial clock | FIS1 | Schmitt |
| PDAT | 65 | I | Serial data<br>L: White Dot<br>H: Black Dot | FIS1 | Schmitt |
| PLAT | 66 | I | Serial data latch strobe<br>(Negative Pulse) | FIS1 | Schmitt |

**μPD65945 (IC4) Pin descriptions**

| SYMBOL | PIN NO. | I/O | DESCRIPTION | PAD CELL. | NOTE |
|---|---|---|---|---|---|
| **SDRAM Bus Interface (33 pin)** | | | | | |
| RA0 | 35 | O | Address bus<br>L: Logic-0<br>H: Logic-1 | FO09 | |
| RA1 | 34 | O | | FO09 | |
| RA2 | 33 | O | | FO09 | |
| RA3 | 32 | O | | FO09 | |
| RA4 | 31 | O | | FO09 | |
| RA5 | 30 | O | | FO09 | |
| RA6 | 29 | O | | FO09 | |
| RA7 | 28 | O | | FO09 | |
| RA8 | 27 | O | | FO09 | |
| RA9 | 26 | O | | FO09 | |
| RA10 | 39 | O | | FO09 | |
| RB | 40 | O | Black select<br>L: Bank-0<br>H: Bank-1 | FO09 | |
| RD0 | 9 | I/O | Data bus<br>L: Logic-0<br>H: Logic-1 | B00U | |
| RD1 | 8 | I/O | | B00U | |
| RD2 | 7 | I/O | | B00U | |
| RD3 | 6 | I/O | | B00U | |
| RD4 | 5 | I/O | | B00U | |
| RD5 | 4 | I/O | | B00U | |
| RD6 | 3 | I/O | | B00U | |
| RD7 | 2 | I/O | | B00U | |
| RD8 | 19 | I/O | | B00U | |
| RD9 | 18 | I/O | | B00U | |
| RD10 | 17 | I/O | | B00U | |
| RD11 | 16 | I/O | | B00U | |
| RD12 | 15 | I/O | | B00U | |
| RD13 | 14 | I/O | | B00U | |
| RD14 | 13 | I/O | | B00U | |
| RD15 | 12 | I/O | | B00U | |
| RCS_N | 41 | O | Chip select<br>L: Select<br>H: Deselect | FO09 | |
| RRAS_N | 42 | O | Command/Control<br>L: Active<br>H: In Active | FO09 | |
| RCAS_N | 43 | O | | FO09 | |
| RWE_N | 44 | O | | FO09 | |
| PCLK | 22 | O | SDRAM operation clock | FE04 | 32.256 MHz |

### 2.7. IC10 (PLCC44) Hardware description

This specfication describes a multifunction analog ASIC to be used in inkjet printer applications. This ASIC integrates two Switching Voltage Regulator circuits, two motor drive circuits and a Reset circuit in a single IC.

The functions implemented are:

- Two DC-to-DC converters providing the following voltages from an unregulator input of +21 volts to +42 volts DC:
  - VCC Voltage Regulator circuit - A buck type switching regulator using a MOSFET (internal to the ASIC), current sense resistor (internal to the ASIC), Schottky diode (external to the ASIC), external inductor and filter capacitor. This converter shall be programmable to provide either +3.3 volts, +5 volts, +5%/-4%, at a current of 10ma.(min.) to 500 ma.(max./ave.).
  - VPH Voltage Regulator circuit - A buck type switching regulator using a MOSFET (internal to the ASIC), current sense resistor (internal to the ASIC), Schottky diode (external to the ASIC), external inductor and filter capacitor. This converter is to have a programmable output voltage (by means of an external resistor divider network) in the range of +10 volts to +15 volts, +/2% with a VBULK input voltage range of +21 volts to +42 volts. With VPH = +11.75 volts the load current is 10 ma.(min.), 1amp. (max./ave.) with a peak of 1300 ma. (peak/ave.) for 400 ms. The VPH regulator shall have a ENABLE bit in the serial register that allows software to turn on and off this converter.
  - The ENABLE bit when set low shall place this ASIC into its lowest stand-by power mode in order to minimize idle power. The VCC regulator is not effected by ENABLE bit.
- Two Motor Drivers:
  - Both Motor Drivers are to be selectable as EITHER a bidirection DC motor driver with PWM control with peak currents of 2.0 amps and RMS currents of TBD mA or a Bipolar stepper motor driver with current levels (average) of 183 ma., 367 ma. and 550 ma. per phase with quarter step mode capability. In stepper mode both drivers shall be capable of being operated in the quarter step mode.
- nRESET Generation

All ASIC input control lines are to be compatible with CMOS type +3.3 volts and +5 volts logic.

PLCC44 (IC10) Pin descriptions

| PIN NO. | PIN NAME | PIN DESCRPTION |
|---|---|---|
| 1 | VCP | (Capacitor VBULK) |
| 2 | CP2 | (Capacitor to CP1) |
| 3 | CP1 | (Capacitor to CP2) |
| 4 | nRESET | Reset Port |
| 5 | VCC | VCC Supply Voltage |
| 6 | GND | Substrate Ground |
| 7 | GND | Substrate Ground |
| 8 | VCC_FB | VCC Regulator Feedback Input |
| 9 | MD1_MODE | Mode Select for Motor Driver MD1 |
| 10 | VCC_SOURCE | Source of internal MOSFET for VCC Regulator |
| 11 | VBULK | VBULK Supply Voltage |
| 12 | MD2_OUT_A+ | MD2-Motor Driver Output a Plus |
| 13 | MD_R_SENSE_A | MD2-Output A Current Sense Resistor |
| 14 | MD2_OUT_A- | MD2-Motor Driver Output A Minus |
| 15 | VBULK | VBULK Supply Voltage |
| 16 | VBULK | VBULK Supply Voltage |
| 17 | GND | Substrate Ground |
| 18 | GND | Substrate Ground |
| 19 | MD1_OUT_A+ | MD1-MOtor Driver Output A Plus |
| 20 | MD1_R_SENSE_A | MD1-Output A Current Sense Resistor |
| 21 | MD1_OUT_A- | MD1-Motor Driver Output A Minus |
| 22 | MD1_DCM_PWM | MD1_DC Motor Driver PWM Input |
| 23 | VBULK | VBULK Supply Voltage |
| 24 | MD2_DCM_PWM | MD2-DC Motor Driver PWM Input |
| 25 | MD1_OUT_B- | MD1-Motor Driver Output B Minus |
| 26 | MD1_R_SENSE_B | MD1-Output B Current Sense |
| 27 | MD1_OUT_B+ | MD1-Motor Driver Output B Plus |
| 28 | GND | Substrate Ground |
| 29 | GND | Substrate Ground |
| 30 | VBULK | VBULK Supply Voltage |
| 31 | VBULK | VBULK Supply Voltage |
| 32 | MD2_OUT_B- | MD2-Motor Driver Output B Minus |
| 33 | MD2_R_SENSE_B | MD2-Output B Current Sense Resistor |
| 34 | MD2_OUT_B+ | MD2-Motor Driver Output B Plus |
| 35 | VBULK | VBULK Supply Voltage |
| 36 | VPH_SOURCE | Source of internal MOSFET for VPH Regulator |
| 37 | MD2_MODE | Mode Select for Motor Driver MD2 |
| 38 | VPH_FB | VPH Regulator Feedback Input |
| 39 | GND | Substrate Ground |
| 40 | GND | Substrate Ground |
| 41 | SDI | Serial Port Data Input |
| 42 | SCLK | Serial Port Clock |
| 43 | nCS | Serial Port Chip Select |
| 44 | AGND | Analog Ground |

# [3] Circuit description of LIU PWB

## 1. LIU block operational description

### 1.1. Block diagram

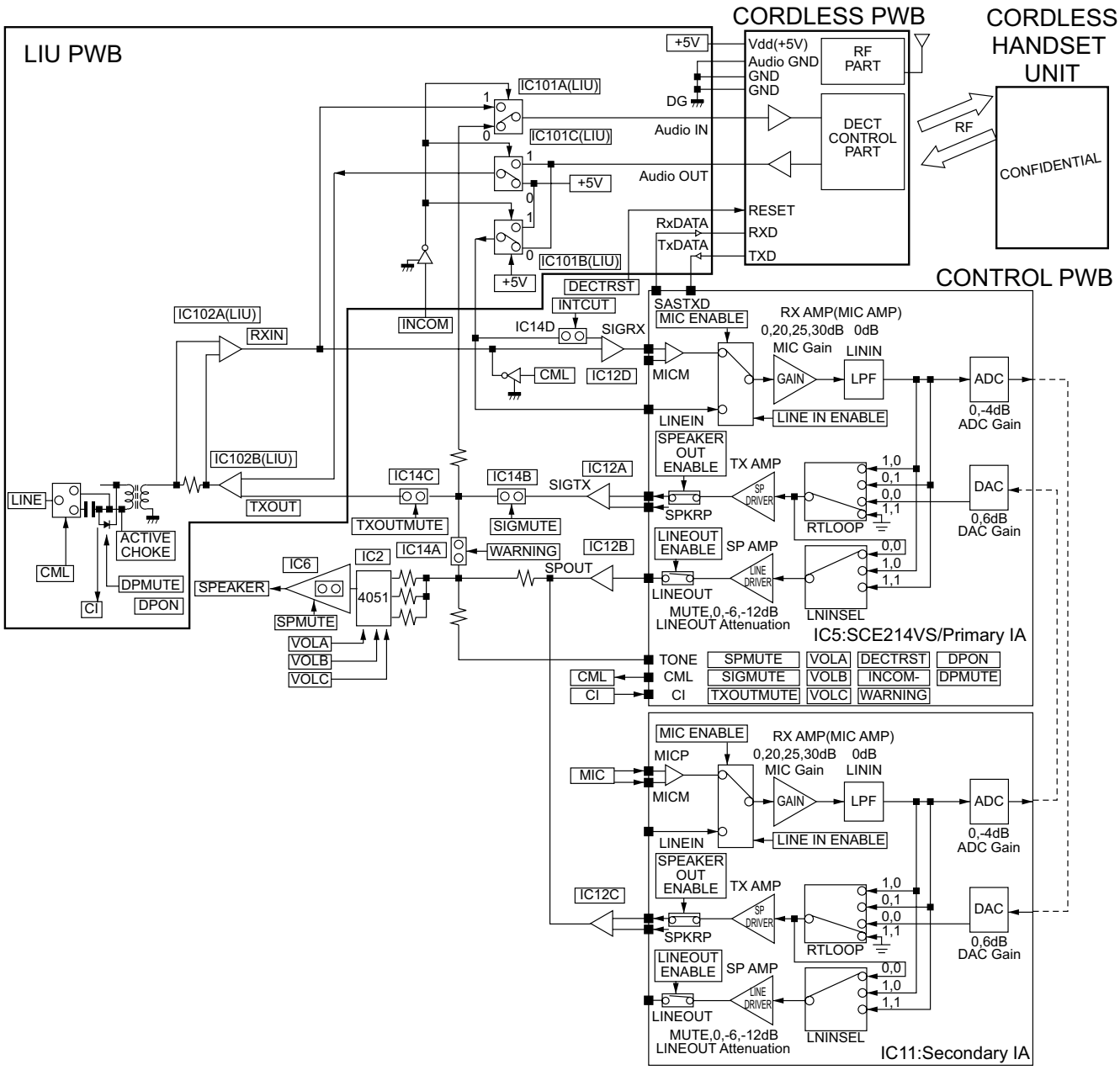



**Fig. 6**

### 1.2. Circuit description

The LIU PWB is composed of the following 8 blocks. (Including combination with modem on control PWB)

1. Speech circuit section
2. Dial transmission section
3. Speaker amplifier section
4. Ringer circuit section
5. CI detection circuit
6. Signal/DTMF transmission level & receiving level
7. Speakerphone section
8. Relay between line, modem and cordless PWB.

### 1.3. Block description

1. Speech circuit section

- This circuit is composed by IC101, IC102 and that circumference circuit.

2. Dial transmission section

- D.P. transmission: The CML relay is turned on and off for control in the DP calling system.
- DTMF transmission: It is formed in the modem, and is output.

3. Speaker amplifier section

- Ringer volume:It is controlled by the combination of the attenuator value of the LINE DRIVER in the modem and the ringer sending level sent from the modem.
- Speaker volume:It is controlled by the attenuator value of the LINE DRIVER in the modem.

4. Ringer circuit section

- The ringer sound is formed in the tone of modem when CI signal is detected. The amplifier circuit drives the speaker of the main body.

5. CI detection circuit

- CI is detected by the photo coupler which is integrated in series in the primary side TEL circuit well proven in the existing unit.

6. Signal/DTMF transmission level & receiving level

- Signal transmission level setting: According to soft switch list.
- DTMF transmission level setting: According to soft switch list.

7. Speakerphone section

- The speakerphone circuit is composed by IC11(Control PWB) of interface and microphone/speaker of the main unit. The voice signals in microphone/speaker are controled by digital signal processer in IC5(Control PWB).

8. Relay between line, modem and cordless PWB

- This part relay the control signal for cordless PWB from control PWB, and connect the voice signal between line, modem and cordless PWB.

### 1.4. Signal selection

The following signals are used to control the transmission line of TEL/FAX signal. For details, refer to the signal selector matrix table.

[Control signals from output port]

| Signal Name | Description |
|---|---|
| CML<br>(The circuit is located in the LIU PWB.) | Line connecting relay and DP generating relay<br>H: Line make<br>L: Line break |
| SP MUTE<br>(The circuit is located in the control PWB.) | Speaker tone mute control signal<br>H: Muting (Power down mode)<br>L: Muting cancel (Normal operation) |
| INCOM | Line select signal for cordless handset<br>H: Internal line<br>L: External line |
| SIGMUTE | Control transmitted signal from modem<br>H: Connect with line<br>L: Disconnect with line |
| TXOUTMUTE | Disconnect with line while intercom<br>H: Connect<br>L: Disconnect |

[Signals for status recognition according to input signals]

| Signal Name | Function |
|---|---|
| CI- | Incoming call (CI) detection signal. |

[Other signals]

| Signal Name | Function |
|---|---|
| AUDIO IN | Receiving signal from line or modem to cordless PWB. |
| SPOUT | Output signal to speaker. |
| TXOUT | Transmission (DTMF) analog signal output from modem. |
| RXIN | Reception (DTMF, others) analog signal input into modem. |
| AUDIO OUT | Sending signal from cordless PWB to line or modem. |

| NO | Signal Name (CNLIU) | NO | Signal Name (CNLIU) |
|---|---|---|---|
| 1 | +24V | 9 | TXOUT |
| 2 | DG | 10 | CML |
| 3 | +5v | 11 | CI- |
| 4 | DATAOUT | 12 | INTCONT |
| 5 | DATAIN | 13 | INTCIN |
| 6 | DECTRST | 14 | HS-(N.C.) |
| 7 | INCOM | 15 | DPON(N.C.) |
| 8 | RXIN | 16 | DPMUTE |

(Example: SENDING/RECEIVING)

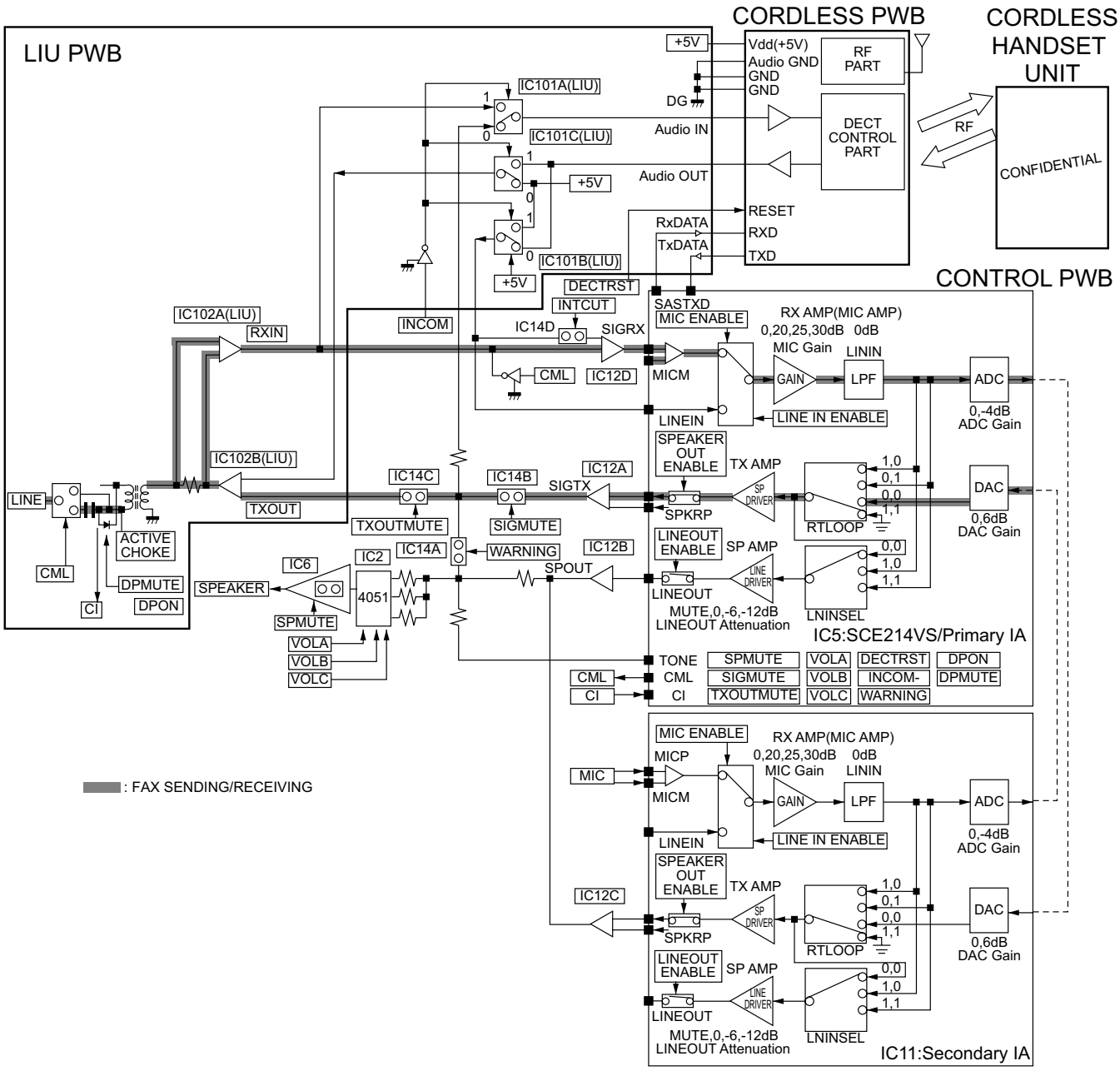



**Fig. 7**

# [4] Circuit description of power supply PWB

## 1. Block diagram

This power supply unit has the function to convert the AC 220-240 V (50/60 Hz) to DC 5 V, and provide these outputs to the equipment. The following explains the function of each block.

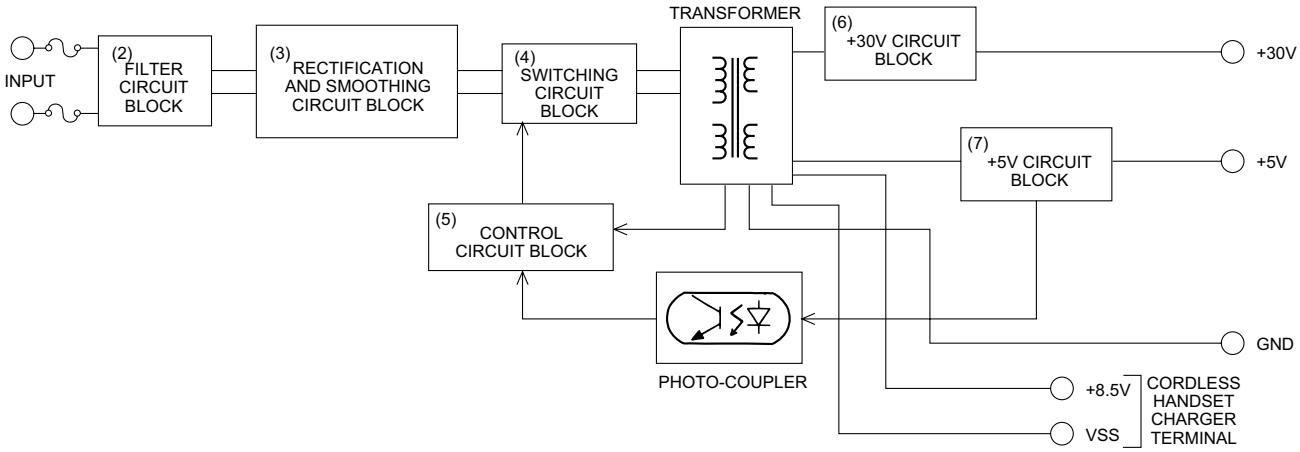



**Fig.8**

## 2. Filter circuit block

This circuit reduces the outgoing noise through the input lines which is generated in the power supply unit, and prevents the invasion of the noise from the lines.(the excessive surge such as the thunder is prevented by the varistor(Z1).)

## 3. Rectification and smoothing circuit block

This circuit rectifies and smoothes the AC input, and provides the DC voltage to the switching circuit block.

## 4. Switching circuit block

This circuit converts the DC voltage (provided from the Rectification and smoothing circuit block) to the high frequency pulse voltage by FET(Q1)'s switching (on/off repeat), and provides the energy to the transformer(T1). It discharges the energy (charged during the FET ON time) to the secondary side during the FET OFF time through the secondary windings. The output voltage on the secondary side provided by the energy depend on the ratio of the winding turns (primary : secondary) etc.

## 5. Control circuit block

This circuit block controls the output voltage by transmitting the detected +5 V voltage to the primary control circuit through the photo-coupler(PC1). In case of the over-current, this circuit reduces providing the energy to the transformer. In case of the over-voltage, this circuit reduces providing the energy to the transformer by letting the Power-Zener(D104; connected between the +30 V output voltage and GND) into the short mode and letting the over-current protection circuit work.

## 6. +30V circuit block

This circuit block rectifies and smoothes the high-frequency pulse voltage provided by the transformer, and provides the DC +30 V output to the equipment.

## 7. +5V circuit block

This circuit block rectifies and smoothes the high-frequency pulse voltage provided by the transformer, and provides about DC +5 V output to the equipment. The output voltage is adjusted by the variable resistor (VR101).

## 8. +8.5V circuit block

This circuit block rectifies and smoothes the high-frequency pulse voltage provided by the transformer, and provides about DC +8.5 V/150 mA output to the battery of the cordless handset for charging and this output is non regulated, if no load the output becom more than +9 V.

# [5] Circuit description of CIS unit

## 1. CIS

CIS is an image sensor which puts the original paper in close contact with the full-size sensor for scanning, being a monochromatic type with the pixel number of 1,728 dots and the main scanning density of 8 dots/mm.

It is composed of sensor, rod lens, LED light source, light-conductive plate, control circuit and so on, and the reading line and focus are previously adjusted as the unit.

Due to the full-size sensor, the focus distance is so short that the set is changed from the light weight type to the compact type.

## 2. Waveforms

The following clock is supplied from SCE214VS of the control board, and VO is output.

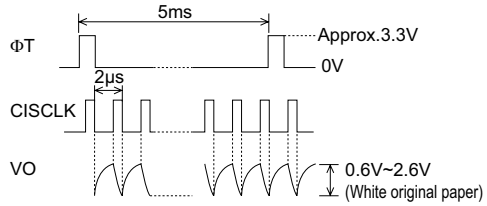
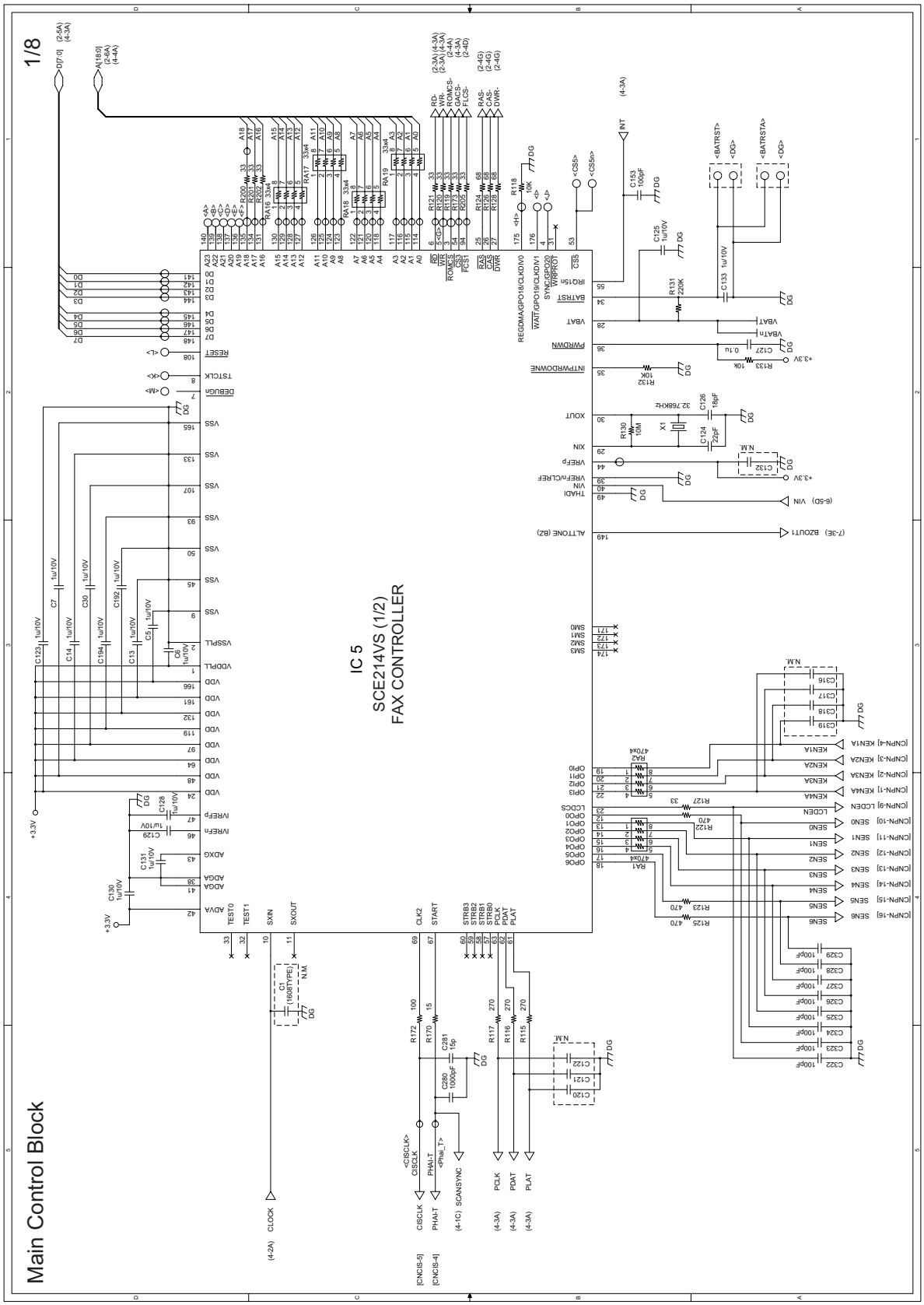



**Fig.9**

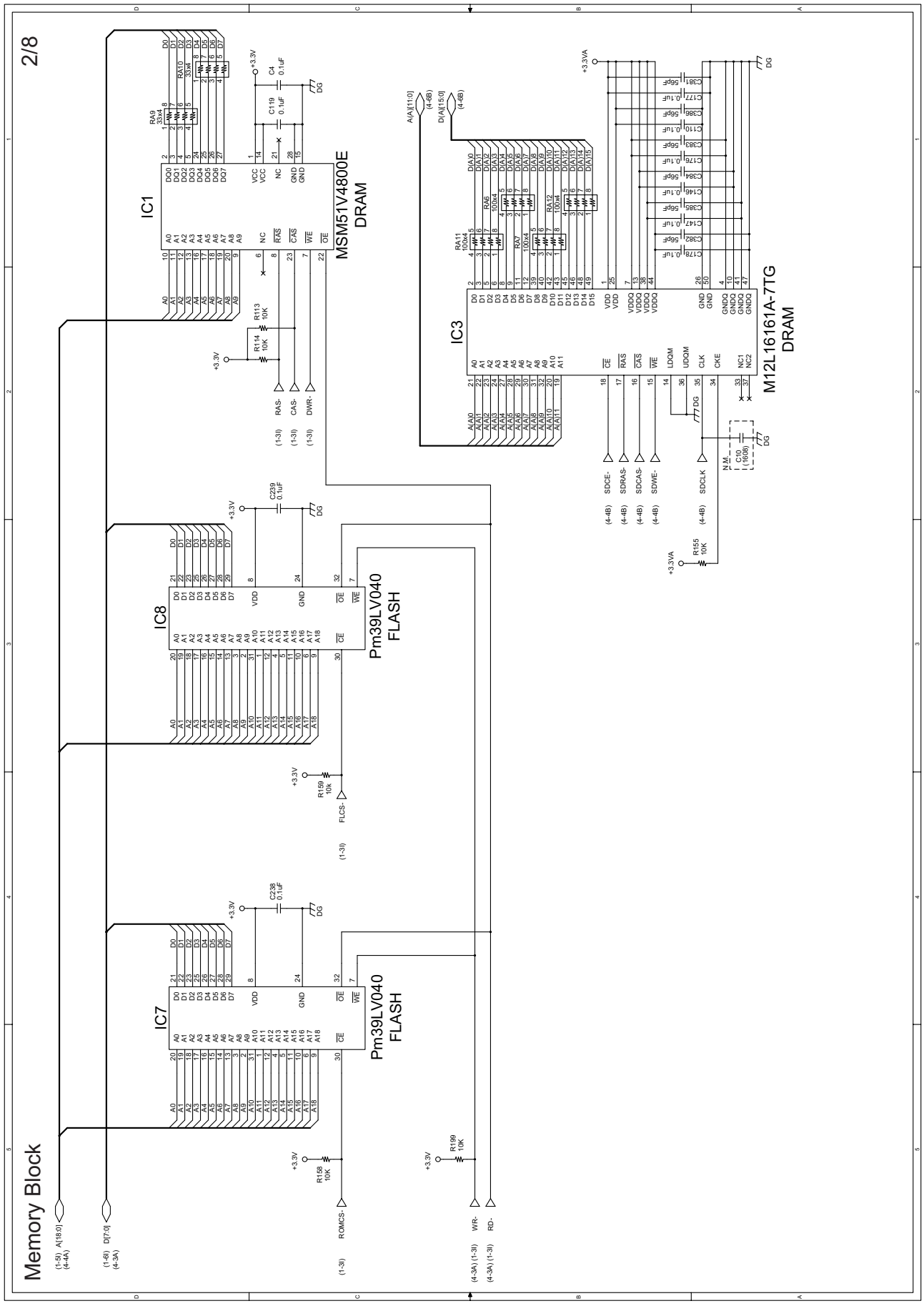
# CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT

## [1] Control PWB circuit

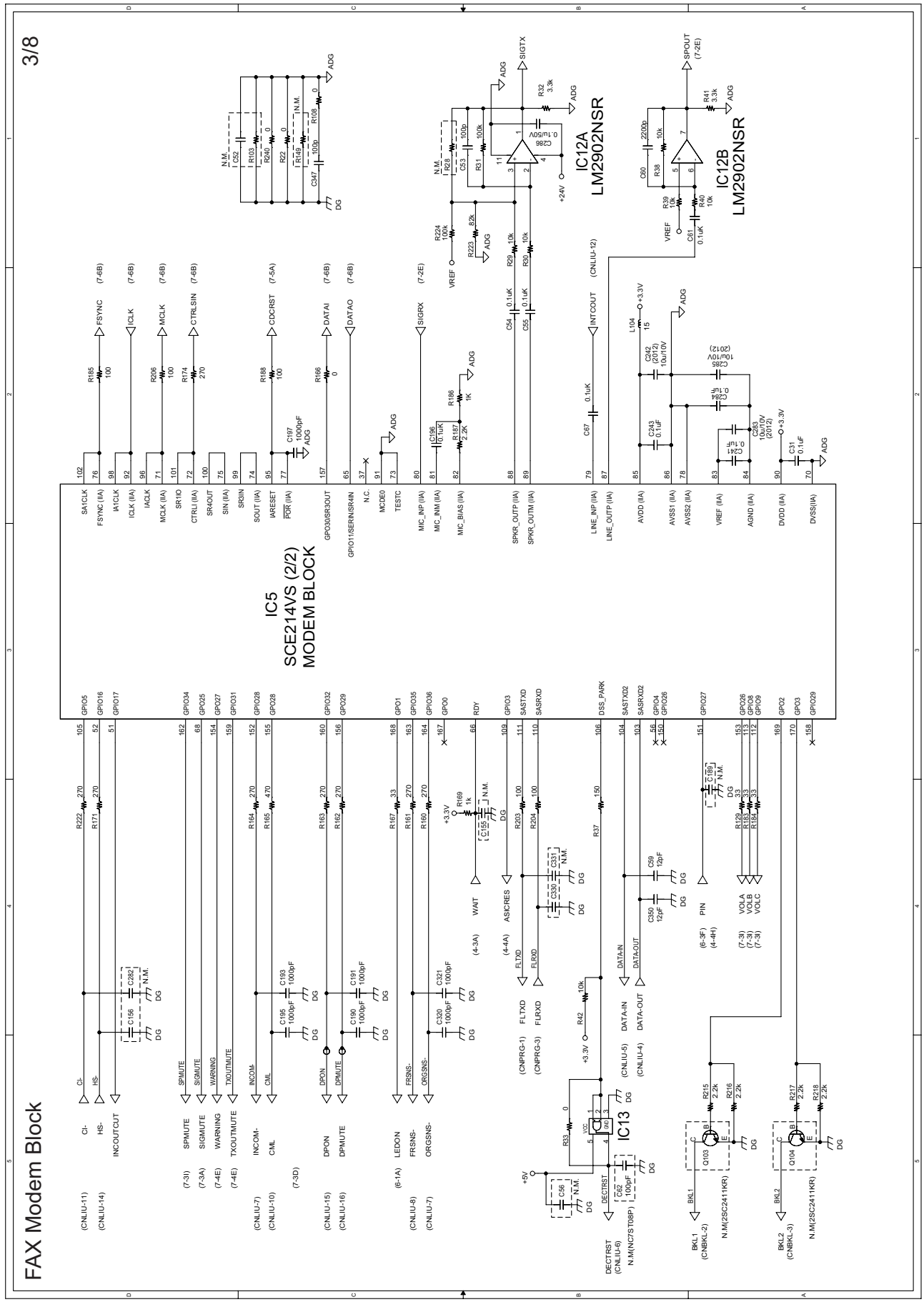
### 1. Main Control Block (1/8)



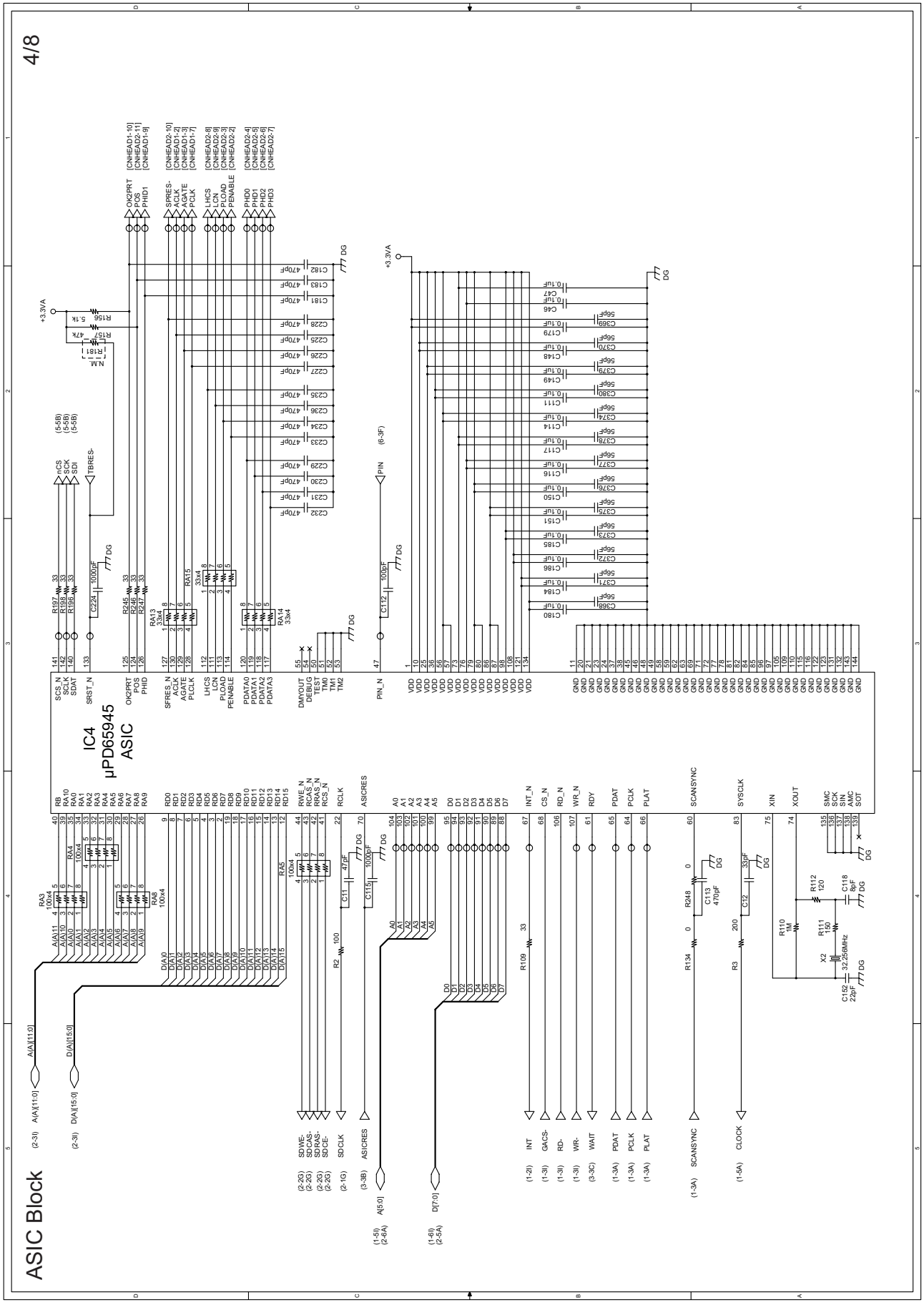
**2. Memory Block (2/8)**



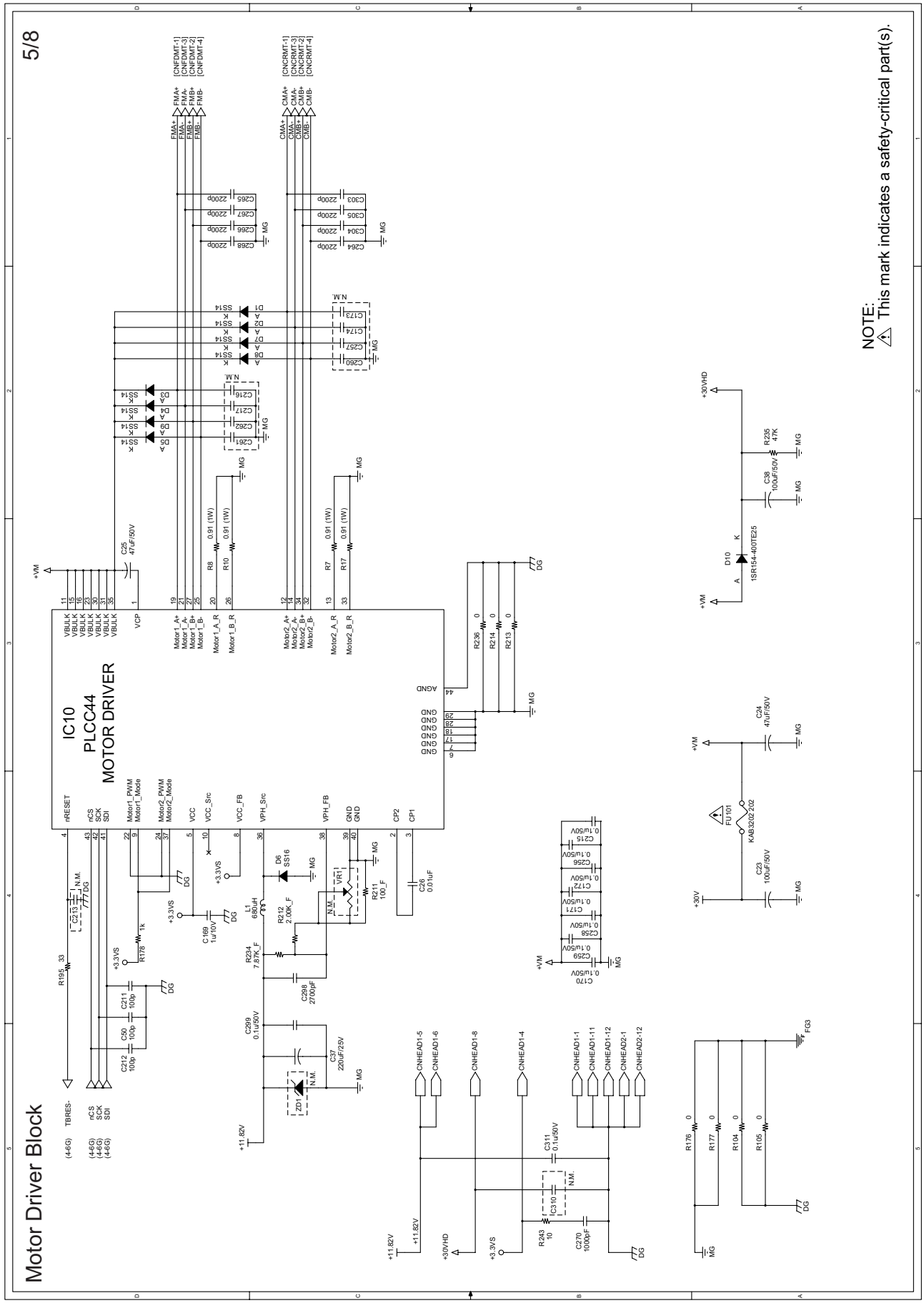
**3. FAX Modem Block (3/8)**



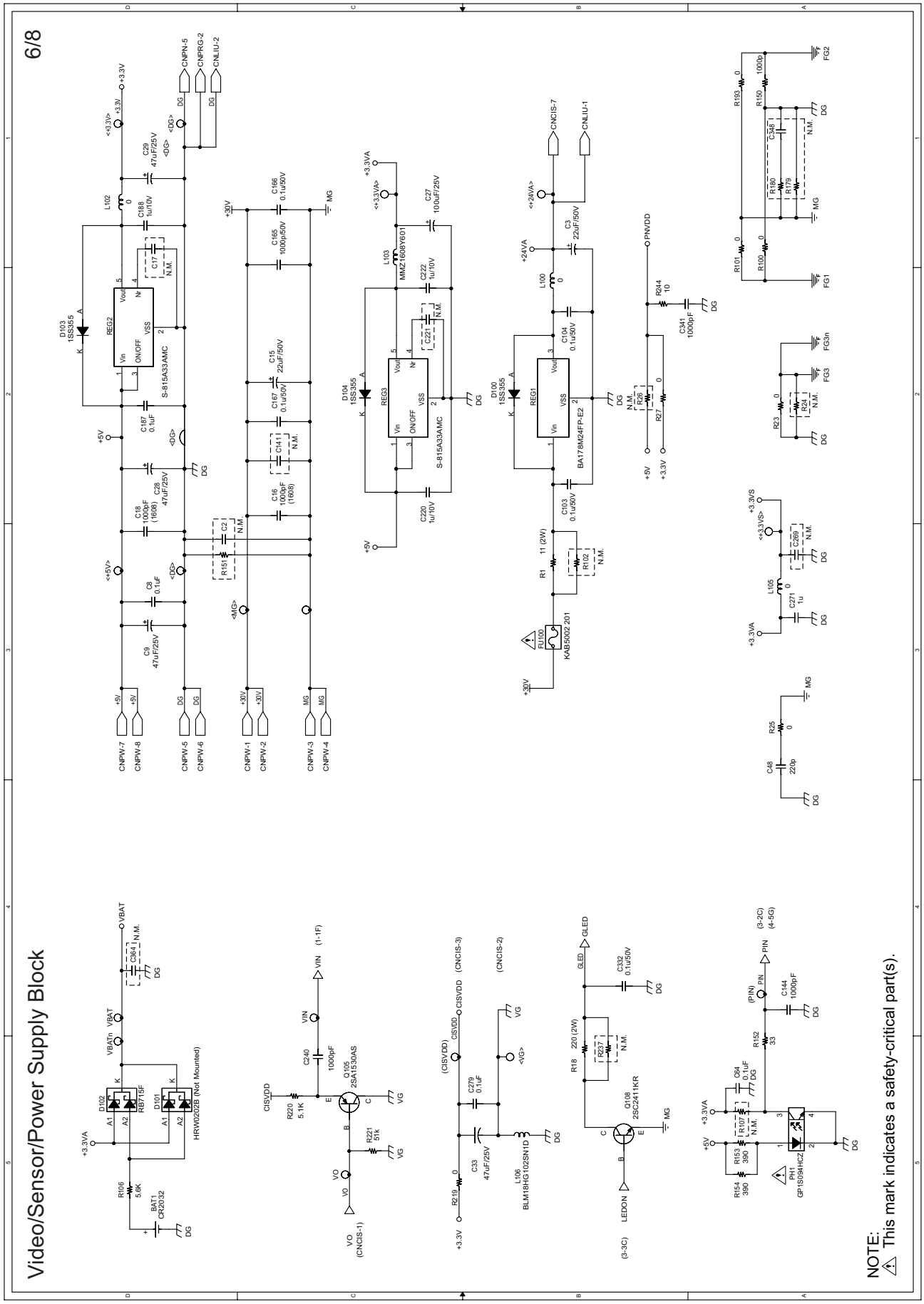
**4. ASIC Block (4/8)**



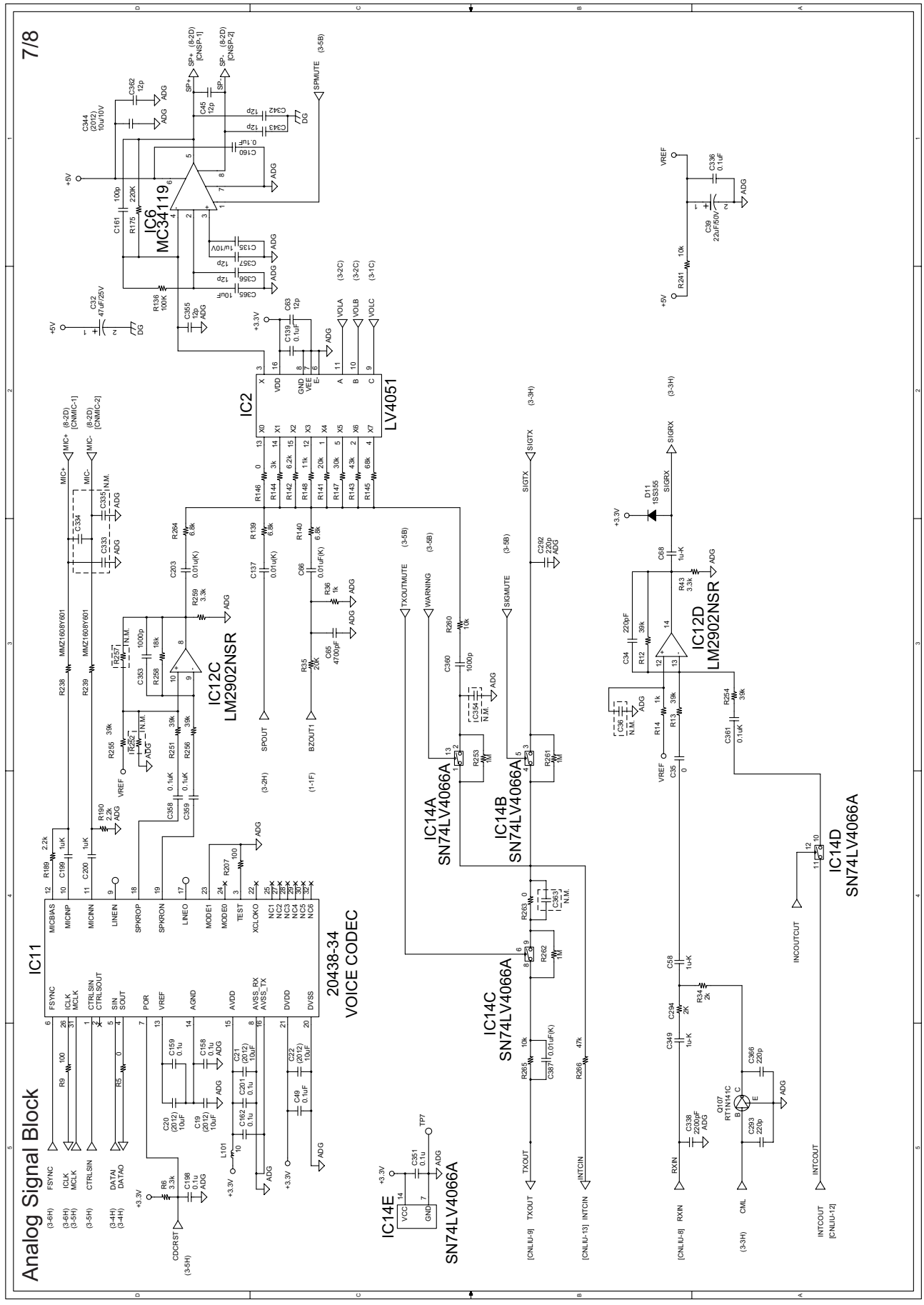
**5. Motor Driver Block (5/8)**



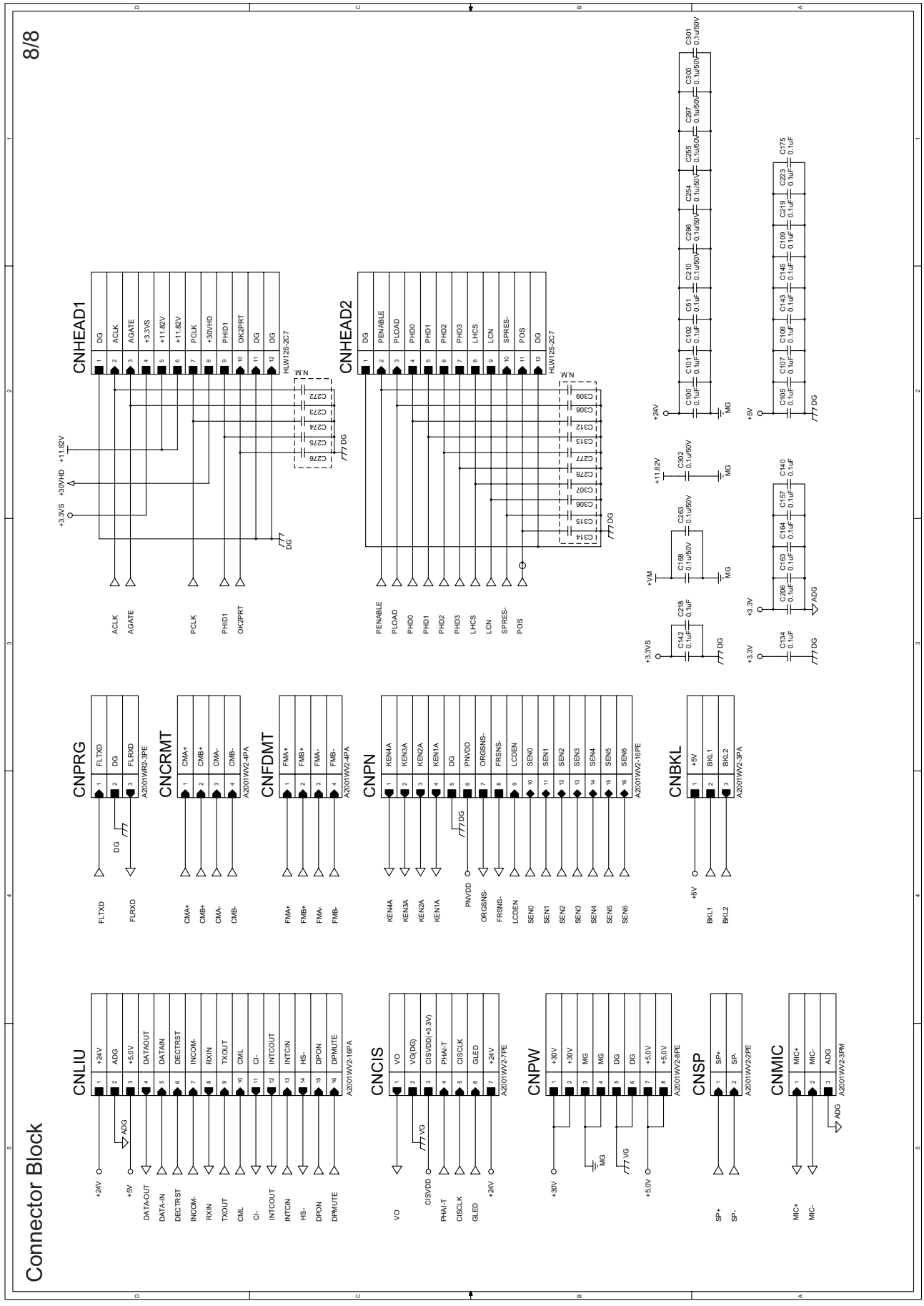
**6. Video/Sensor/Power Supply Block (6/8)**



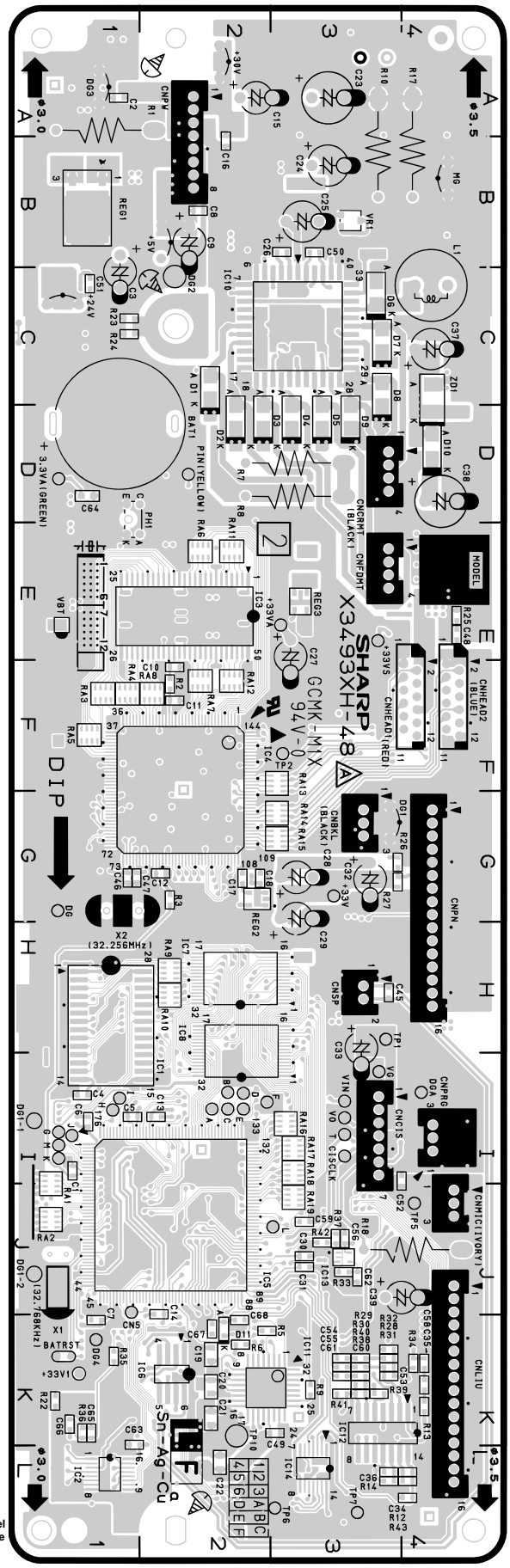
**7. Analog Signal Block (7/8)**



**8. Connector Block (8/8)**



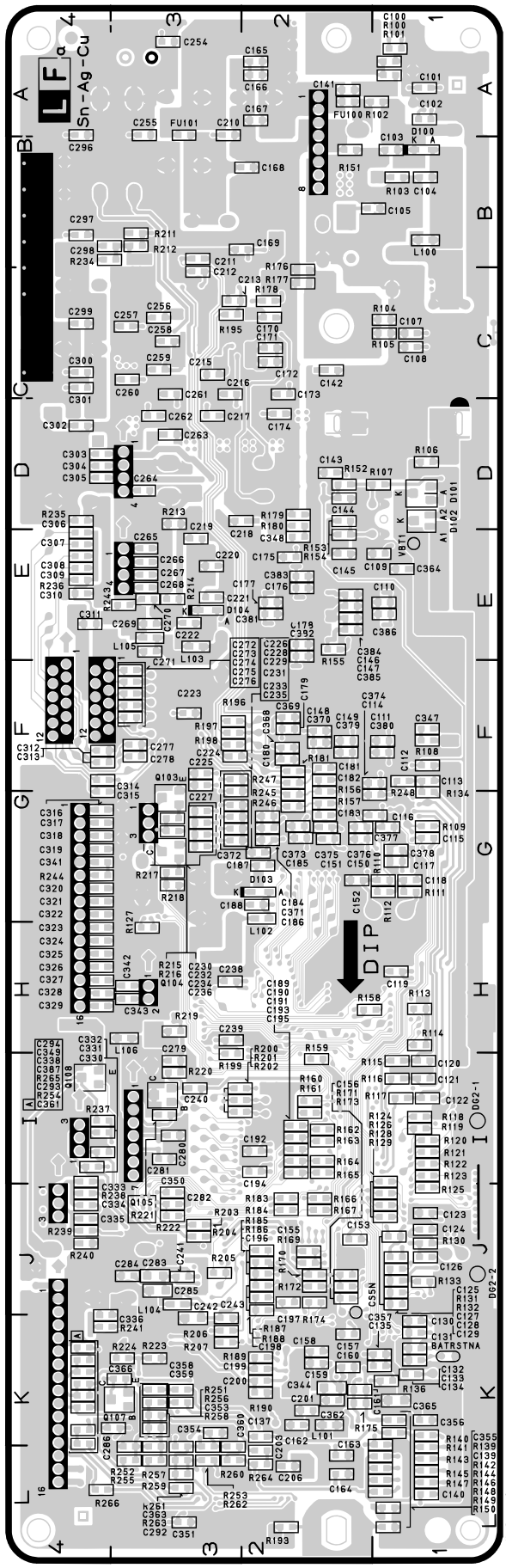
**9. Control PWB parts layout (Top side)**




LFa Sn-Ag-Cu

**The CONTROL PWB of the model employs lead-free solder.**

**10. Control PWB parts layout (Bottom side)**

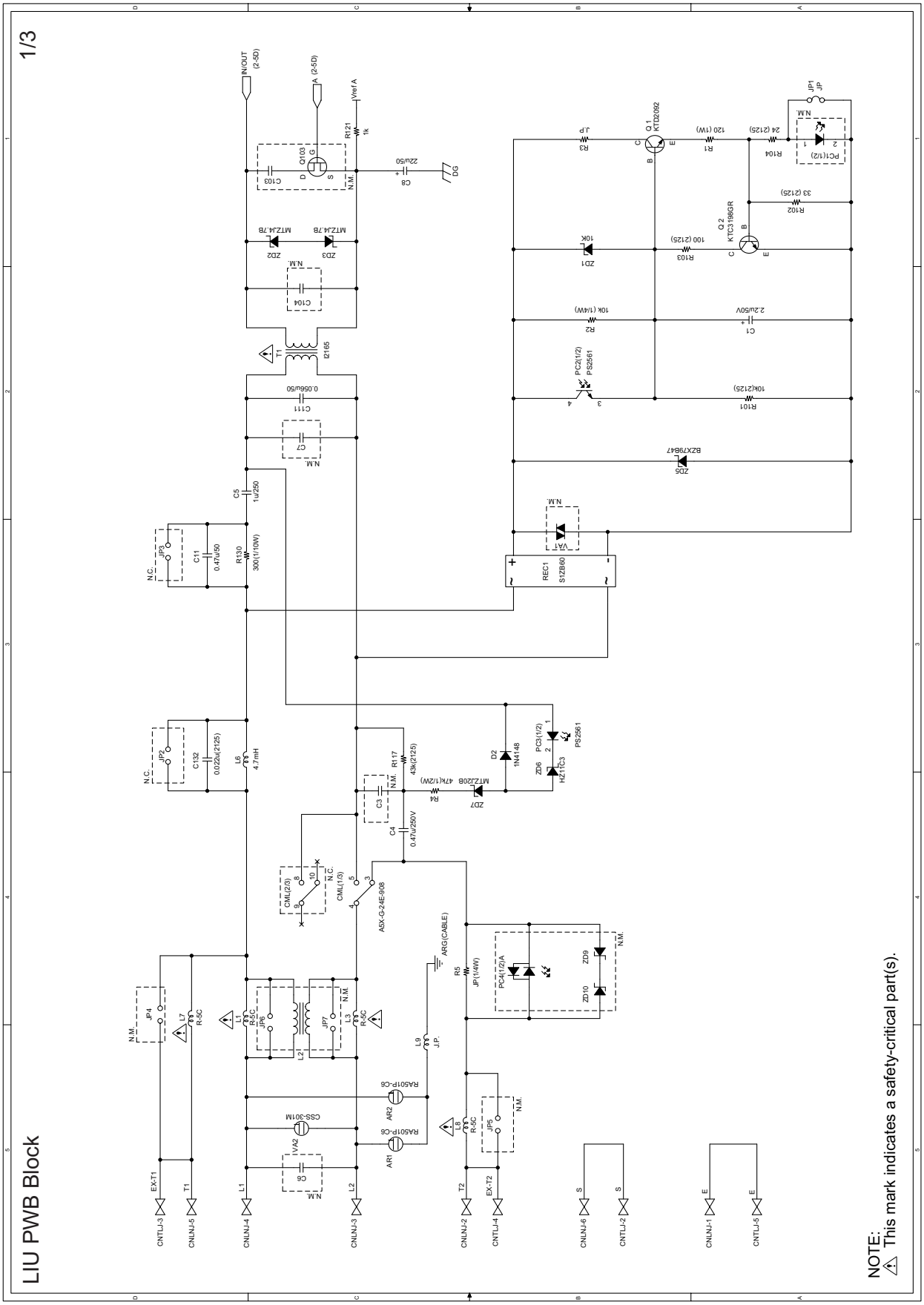



LFa Sn-Ag-Cu

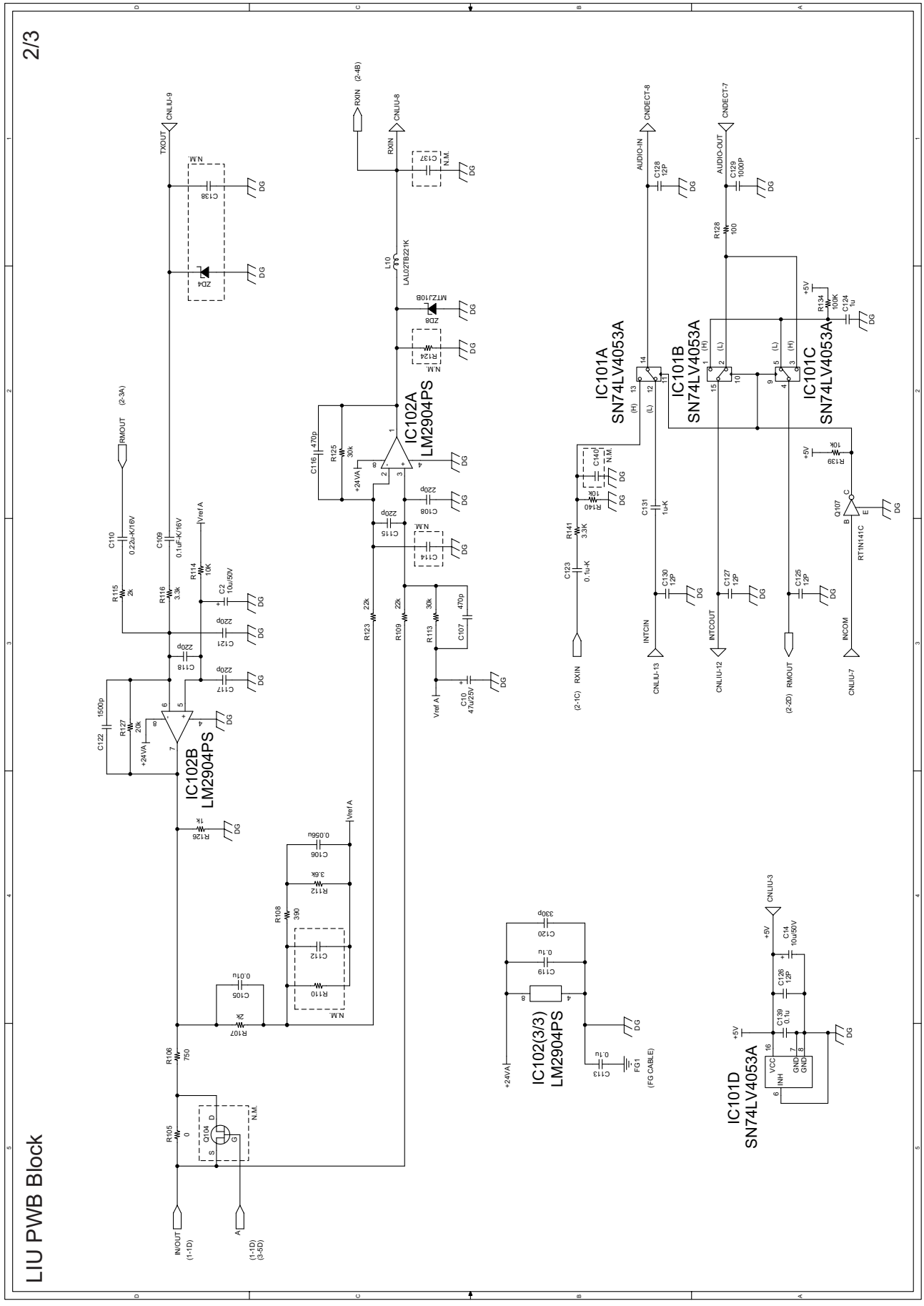
**The CONTROL PWB of the model employs lead-free solder.**

# [2] LIU PWB circuit

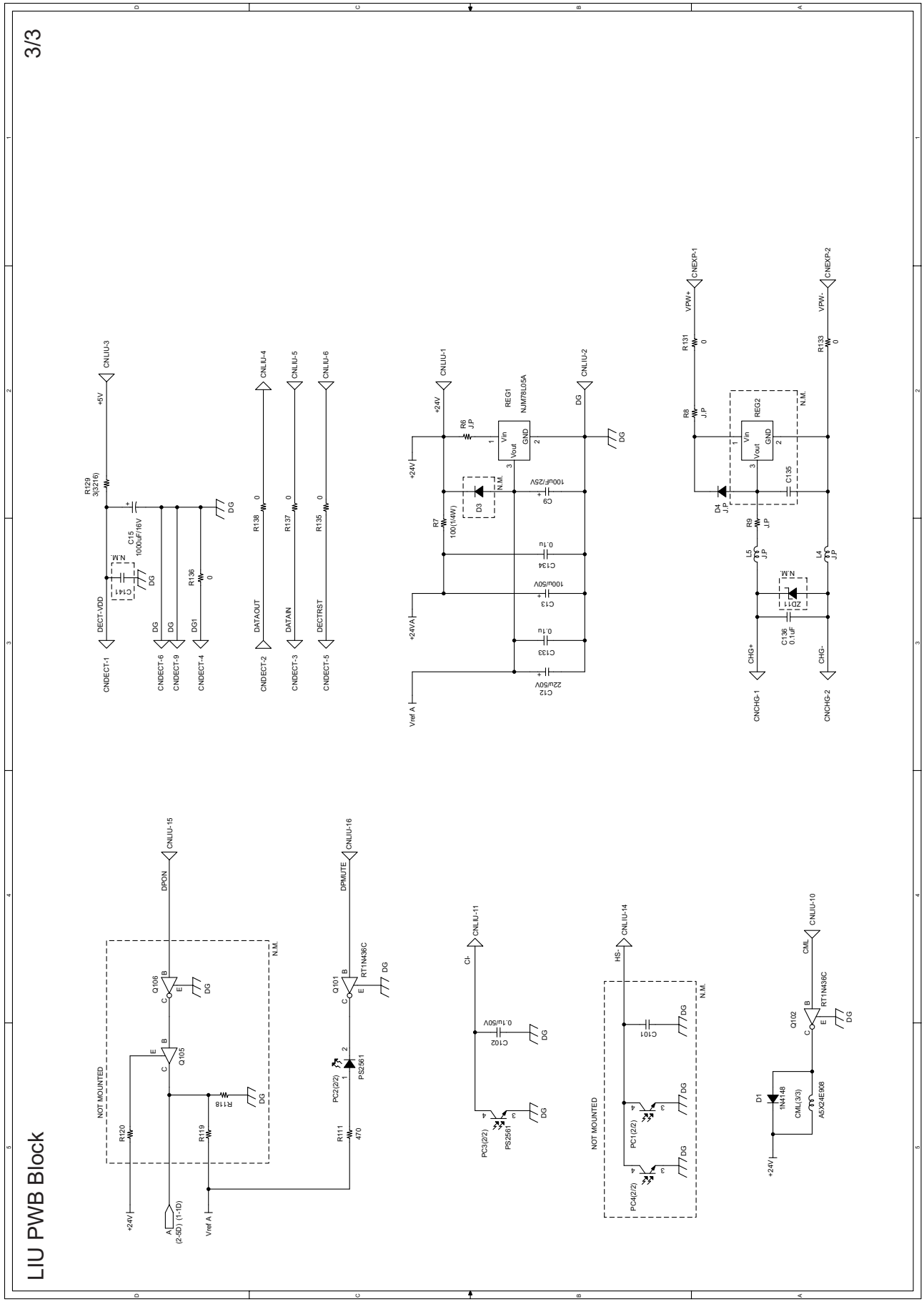
## 1. LIU PWB Circuit (1/3)



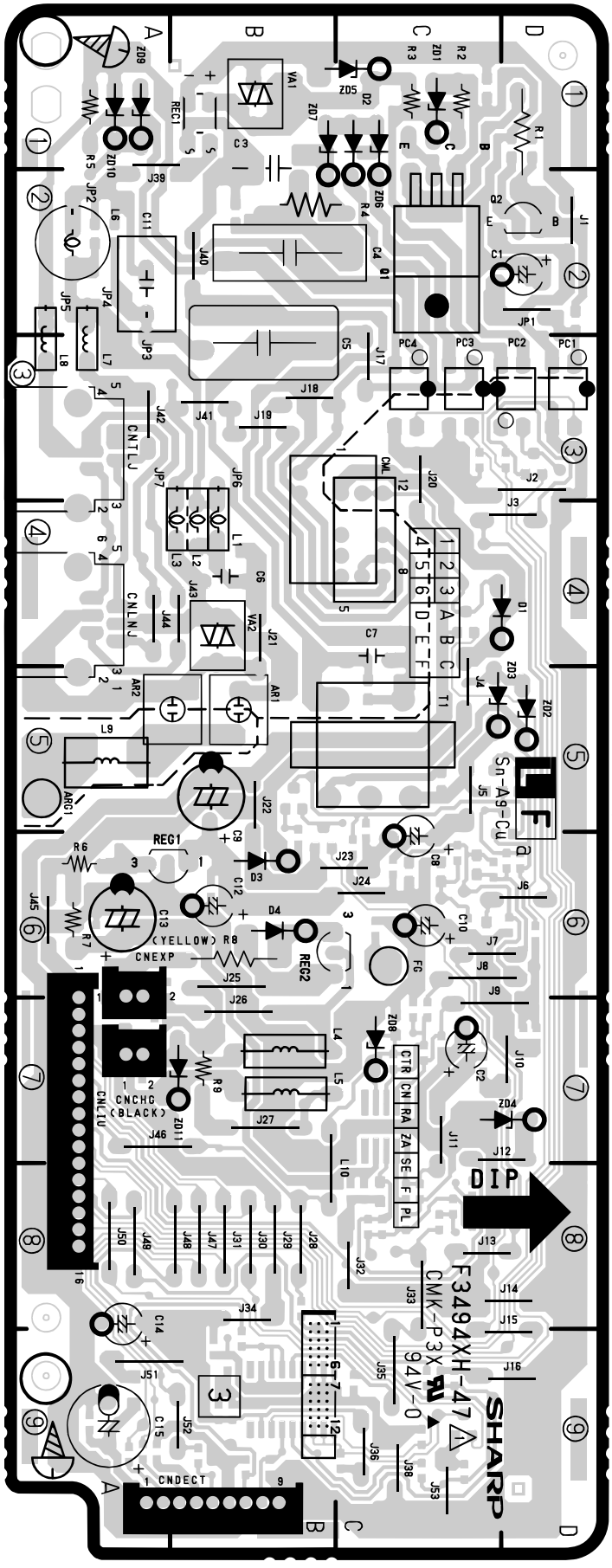
**2. LIU PWB Circuit (2/3)**



**3. LIU PWB Circuit (3/3)**

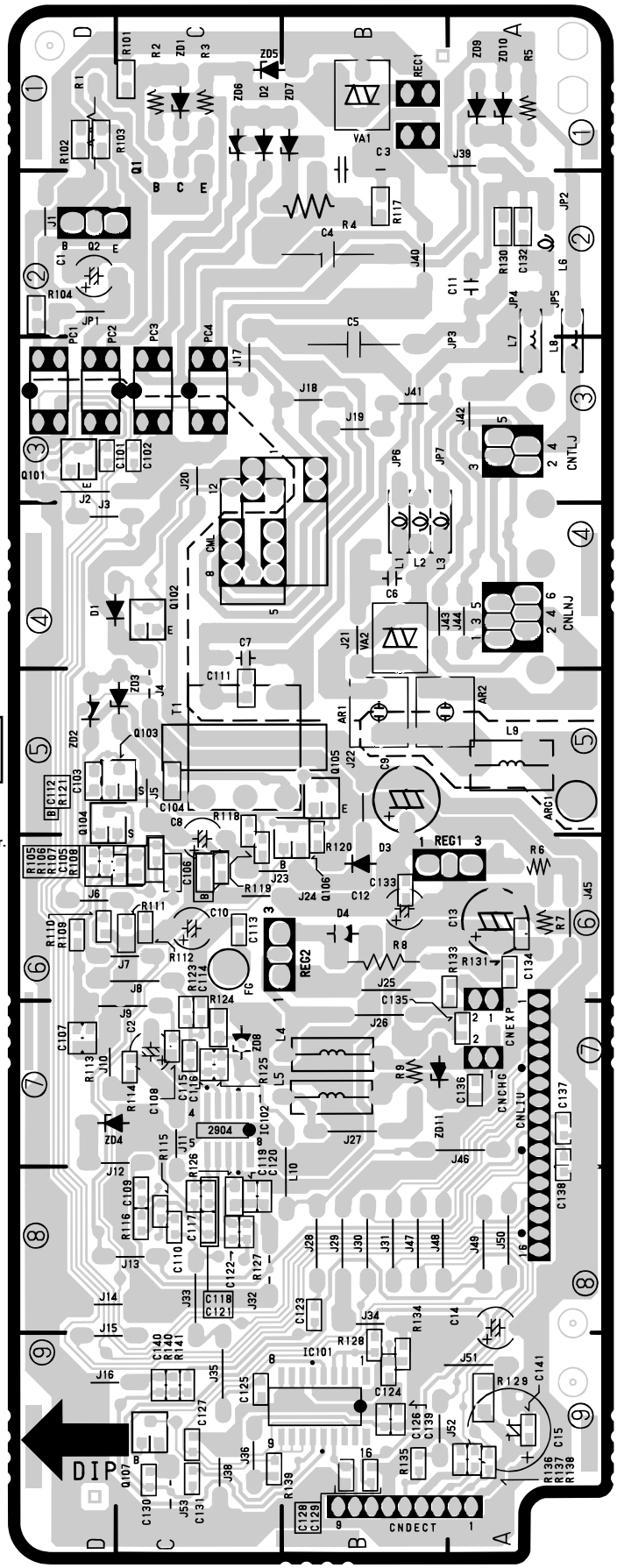


**4. LIU PWB parts layout (Top side)**




The LIU PWB of the model employs lead-free solder.

**5. LIU PWB parts layout (Bottom side)**

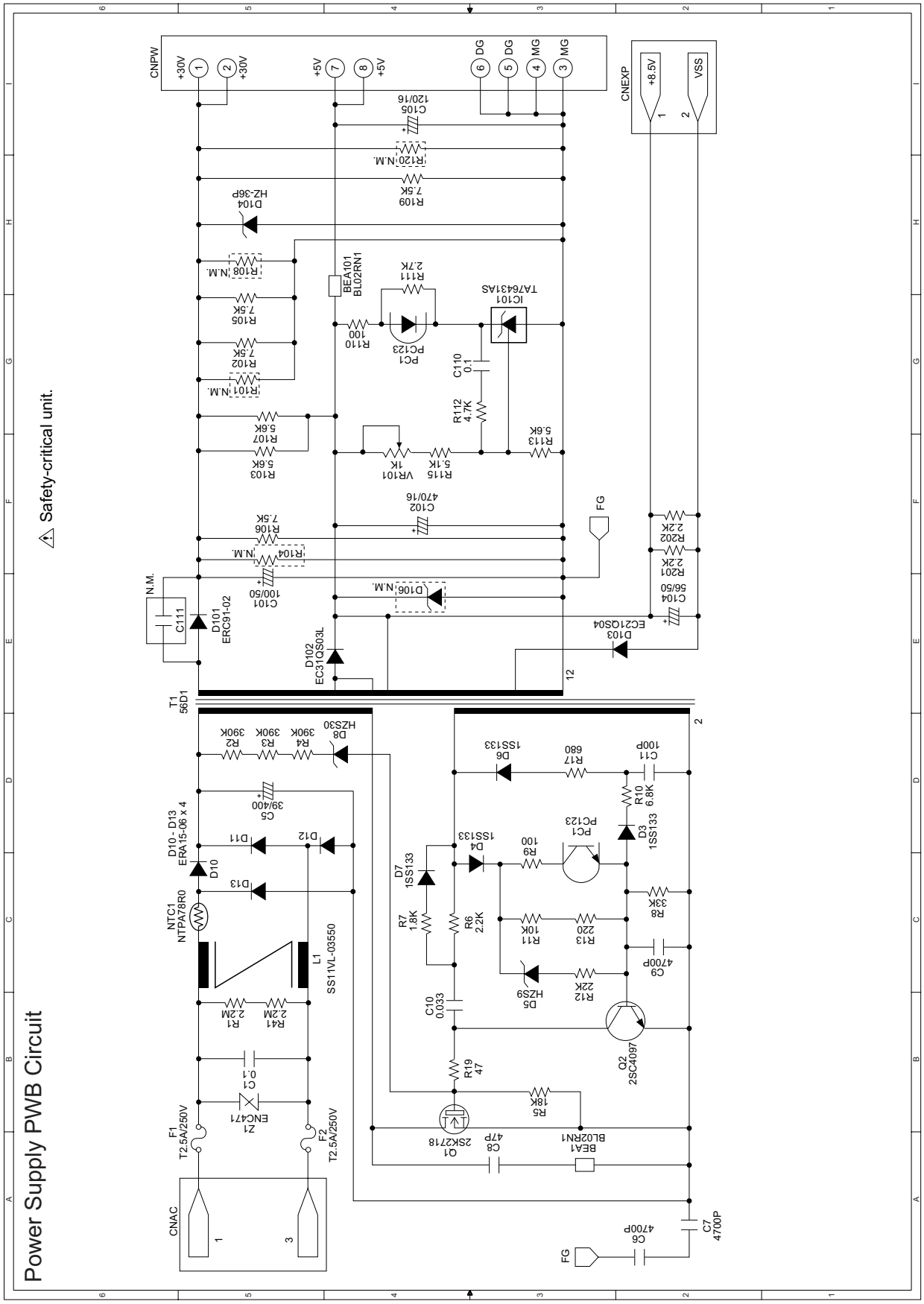



LFa
Sn-Ag-Cu

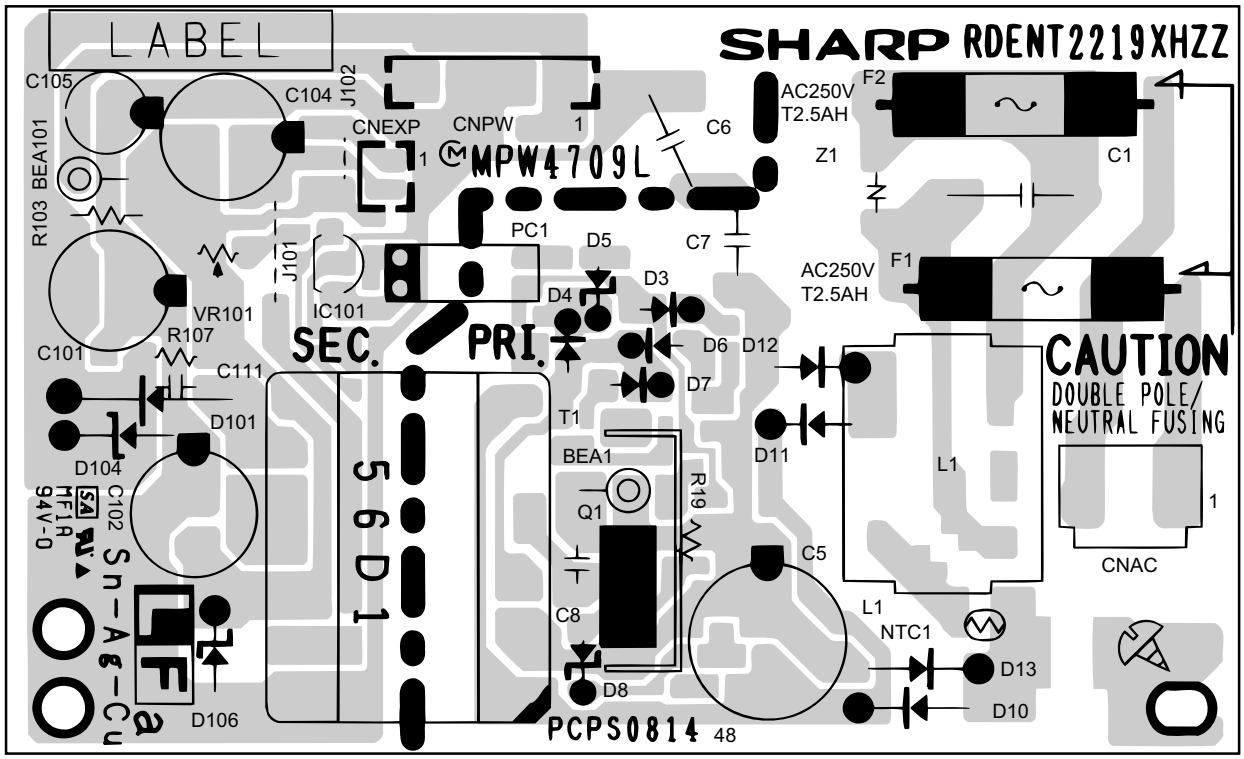
**The LIU PWB of the model employs lead-free solder.**

## [3] Power Supply PWB circuit

### 1. Power Supply PWB circuit



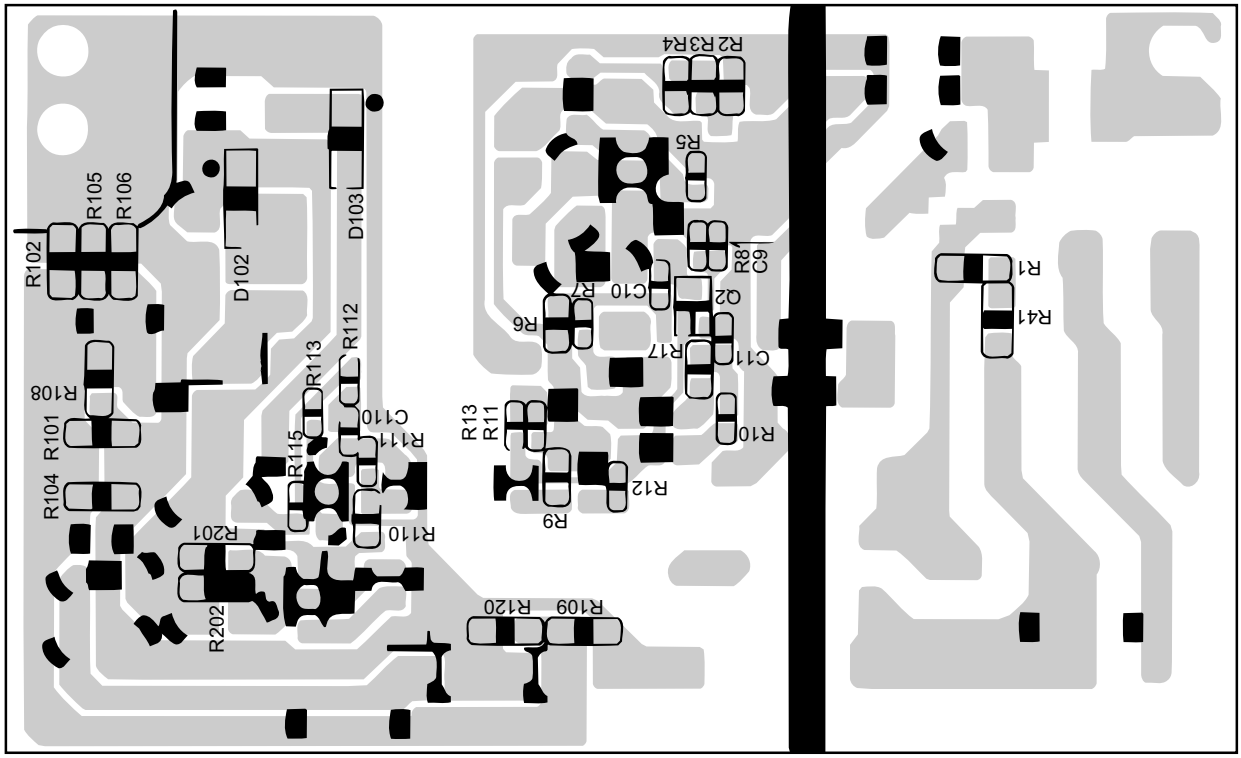
**2. Power Supply PWB parts layout (Top side)**




LFa Sn-Ag-Cu — **The POWER PWB of the model employs lead-free solder.**

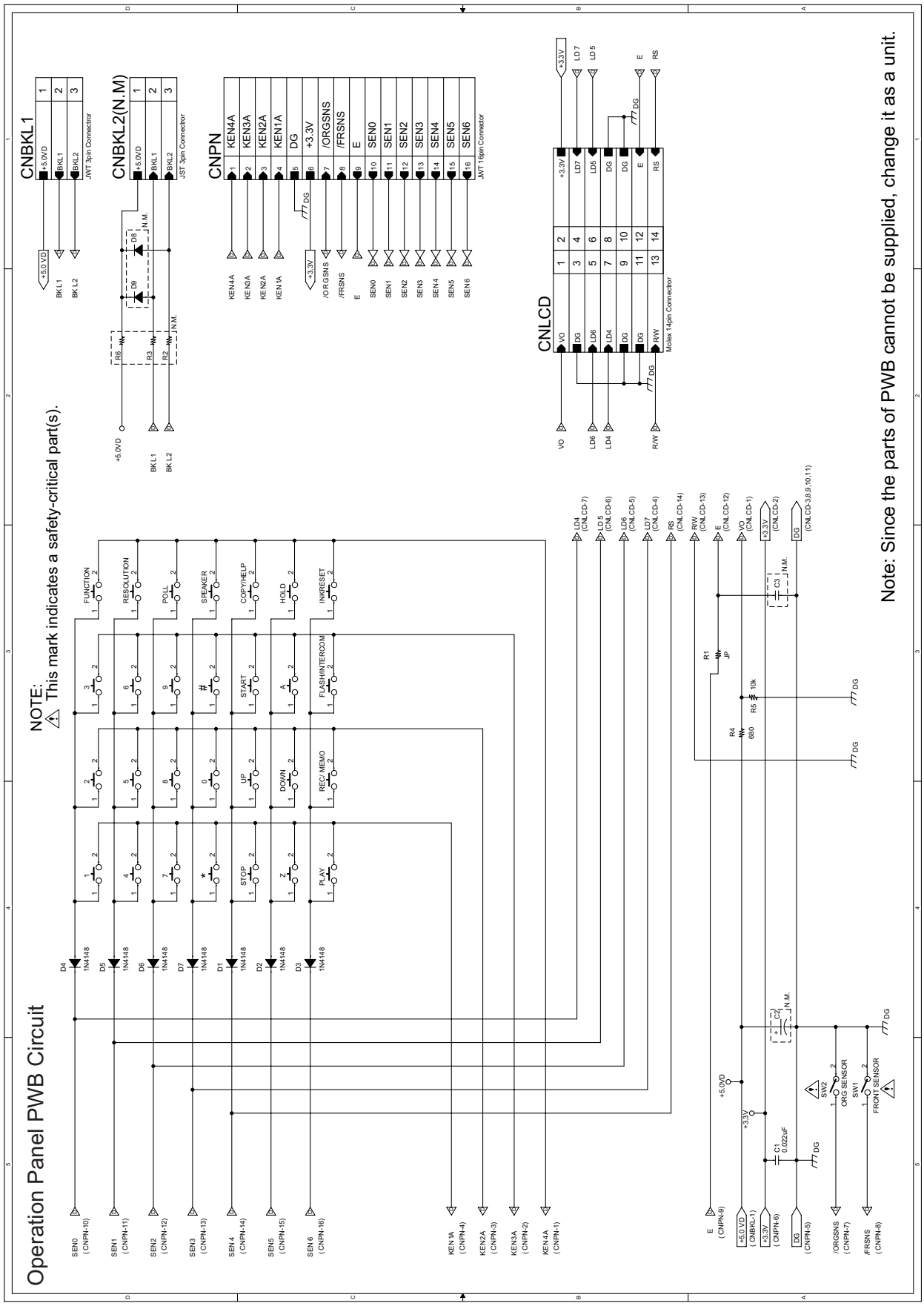
**3. Power Supply PWB parts layout (Bottom side)**

LFa Sn-Ag-Cu — **The POWER PWB of the model employs lead-free solder.**

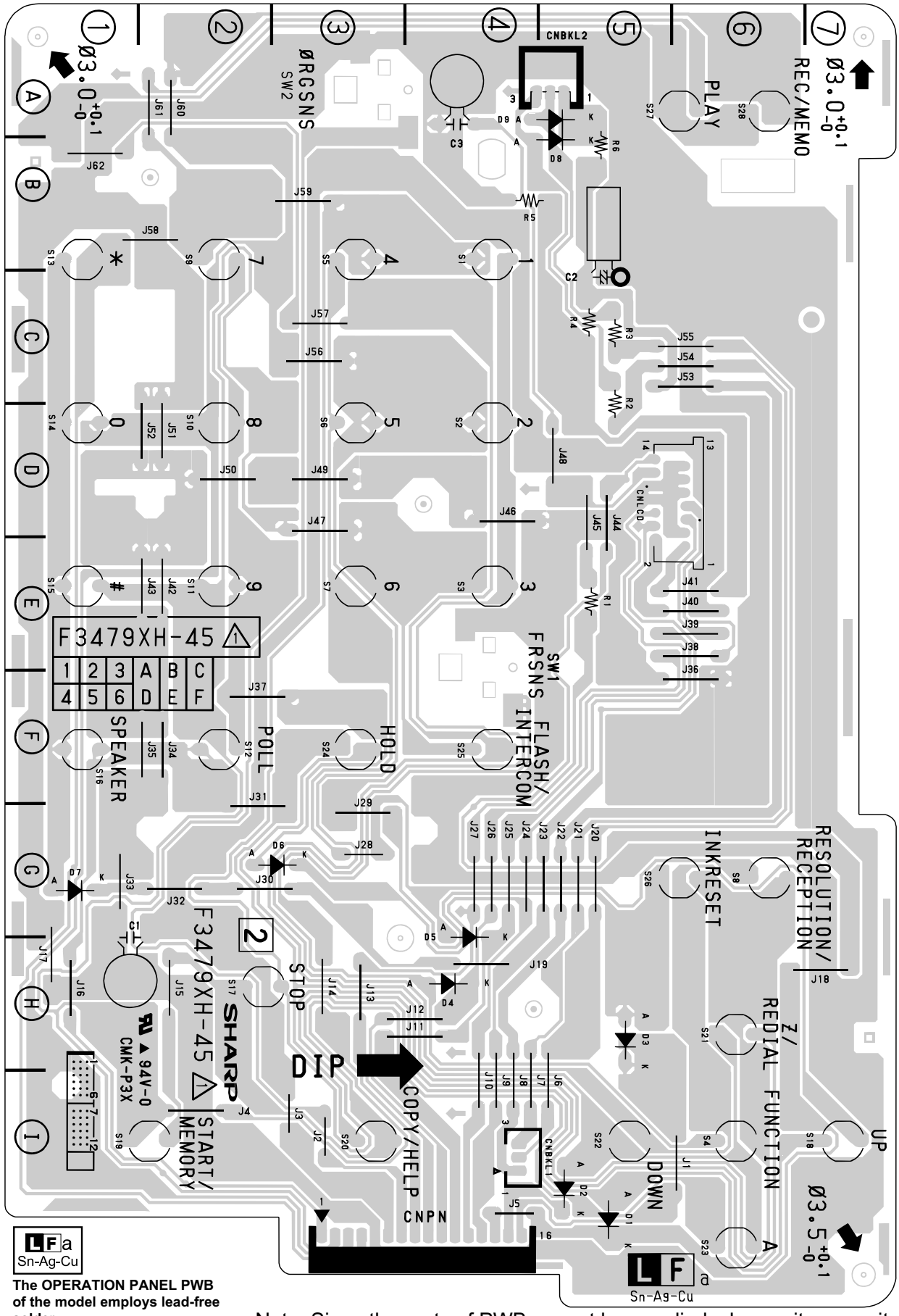


# [4] Operation Panel PWB circuit

## 1. Operation Panel PWB circuit



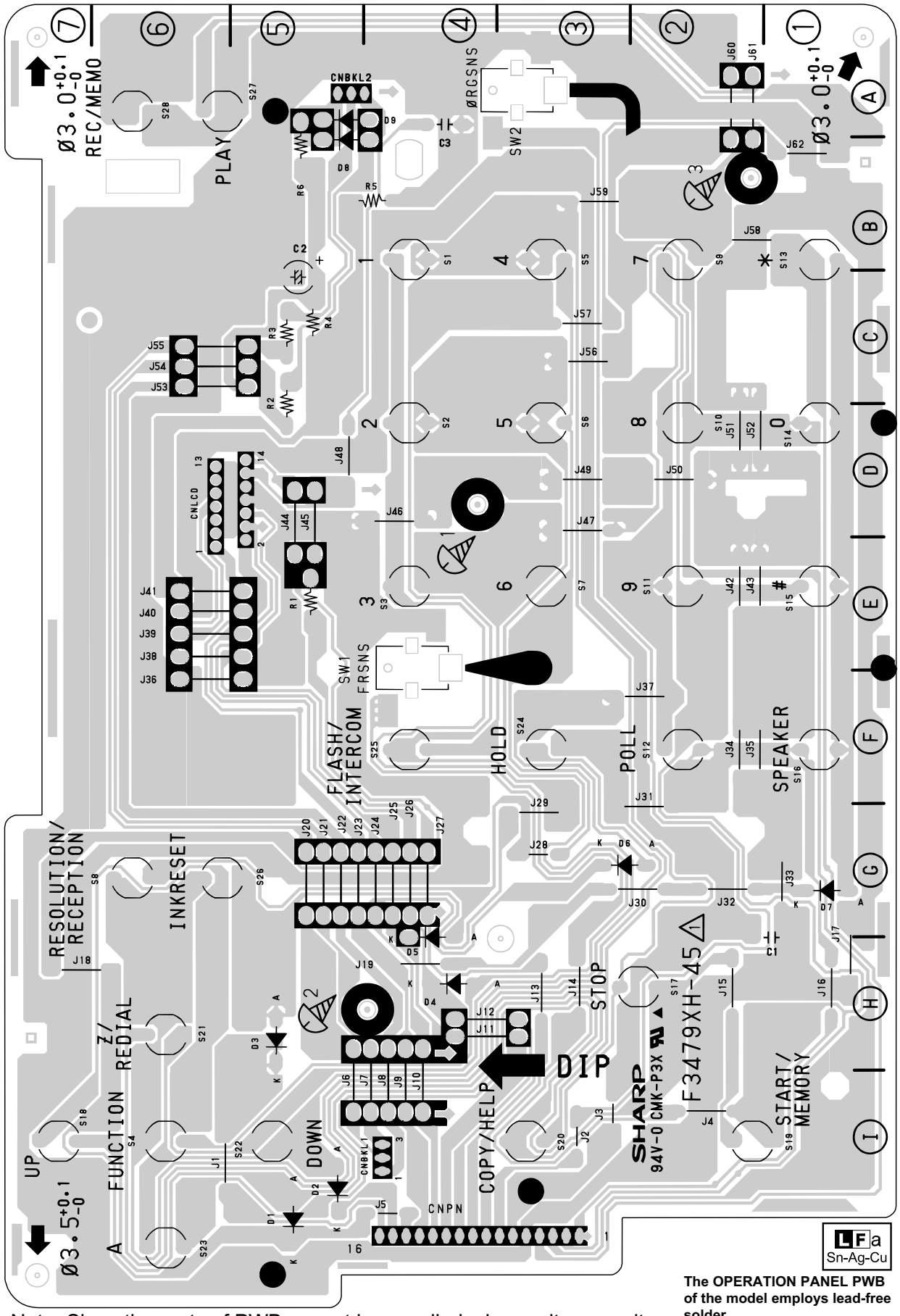
**2. Operation Panel PWB parts layout (Top side)**




**The OPERATION PANEL PWB of the model employs lead-free solder.**

Note: Since the parts of PWB cannot be supplied, change it as a unit.

**3. Operation Panel PWB parts layout (Bottom side)**

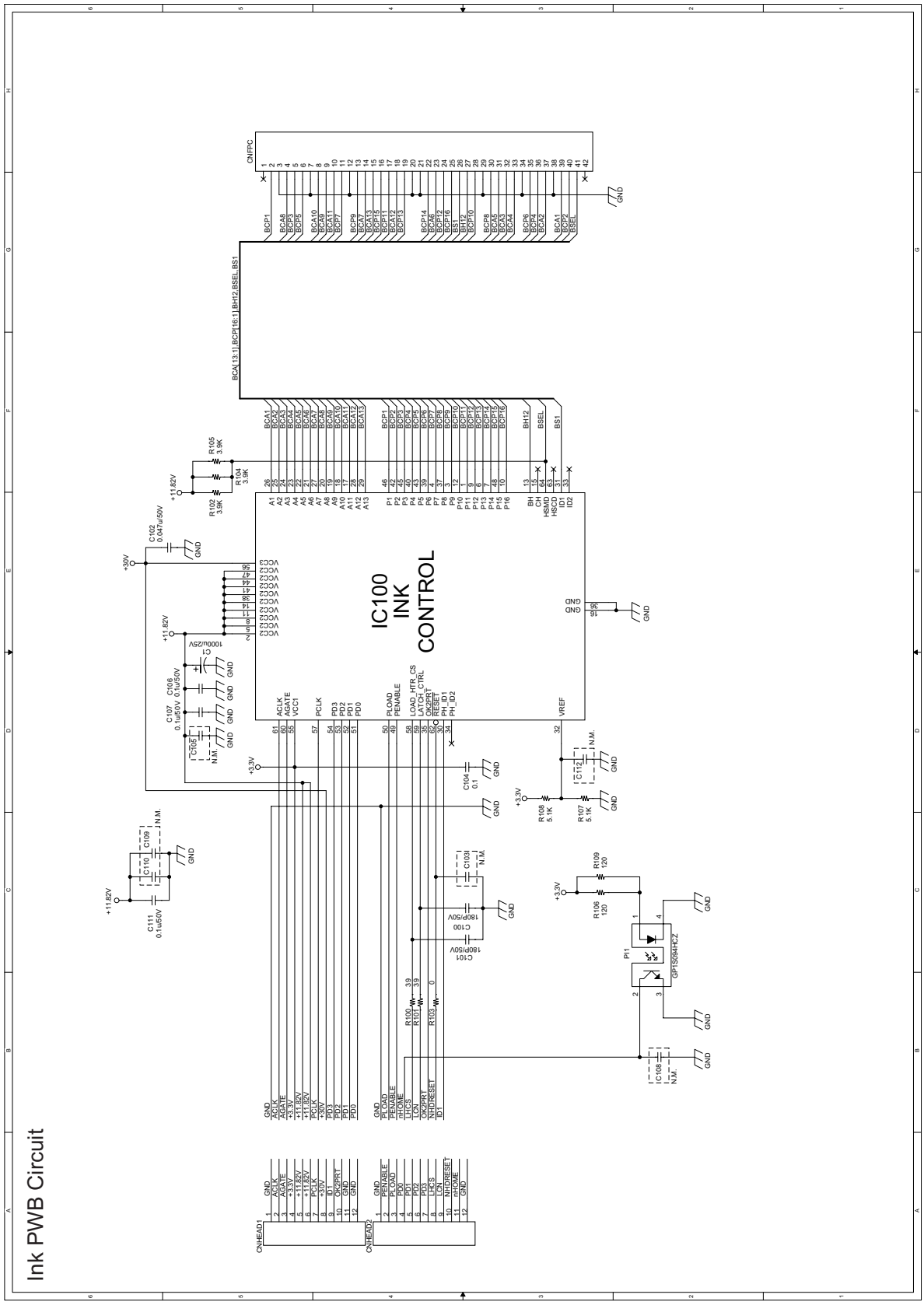



**The OPERATION PANEL PWB of the model employs lead-free solder.**

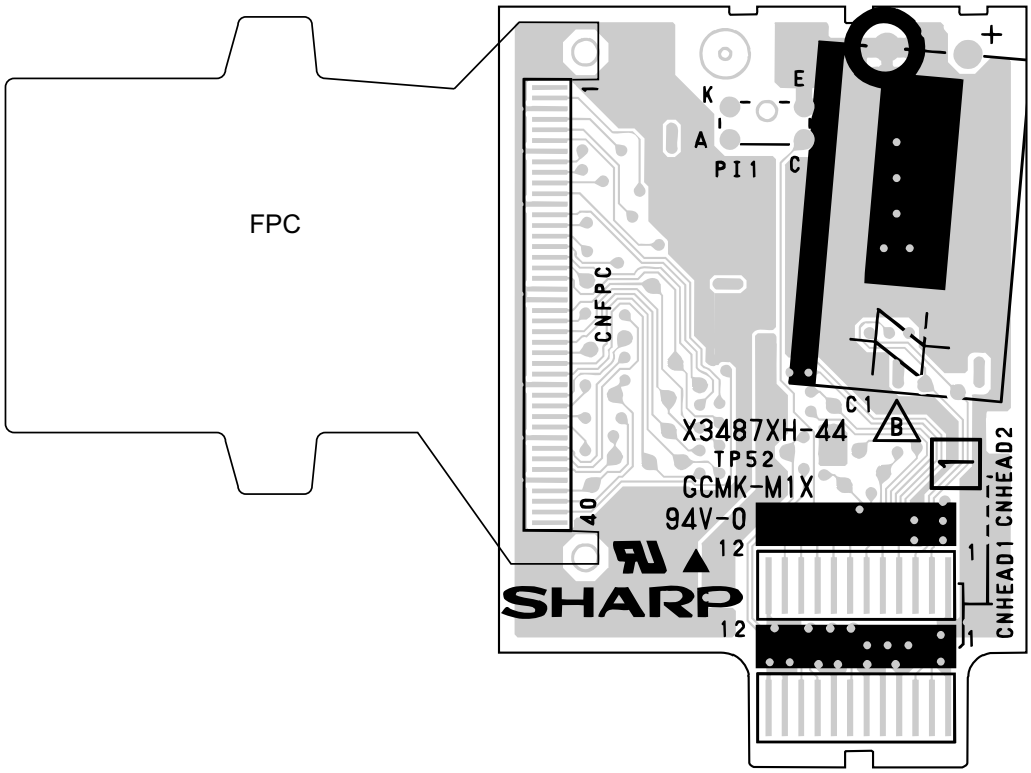
Note: Since the parts of PWB cannot be supplied, change it as a unit.

# [5] Ink PWB circuit

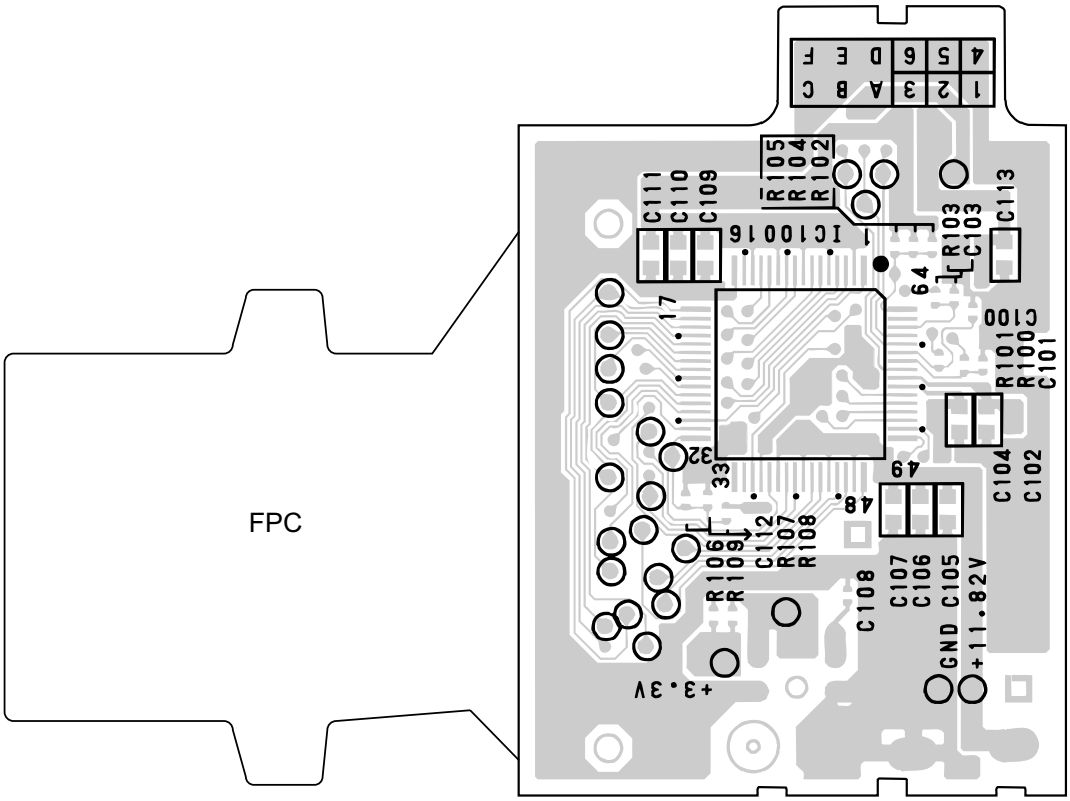
## 1. Ink PWB Circuit



**2. Ink PWB parts layout (Top side)**

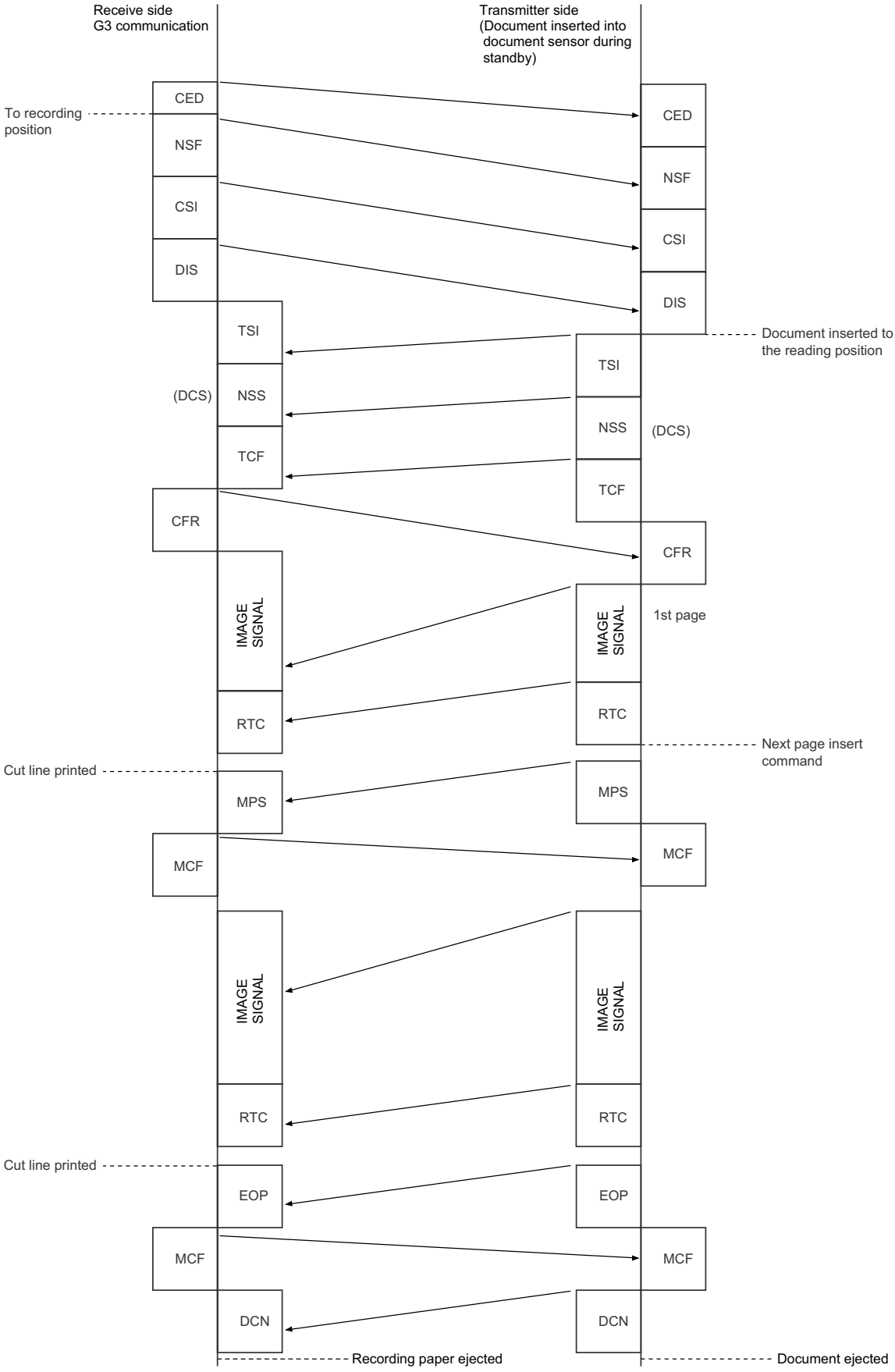



**3. Ink PWB parts layout (Bottom side)**

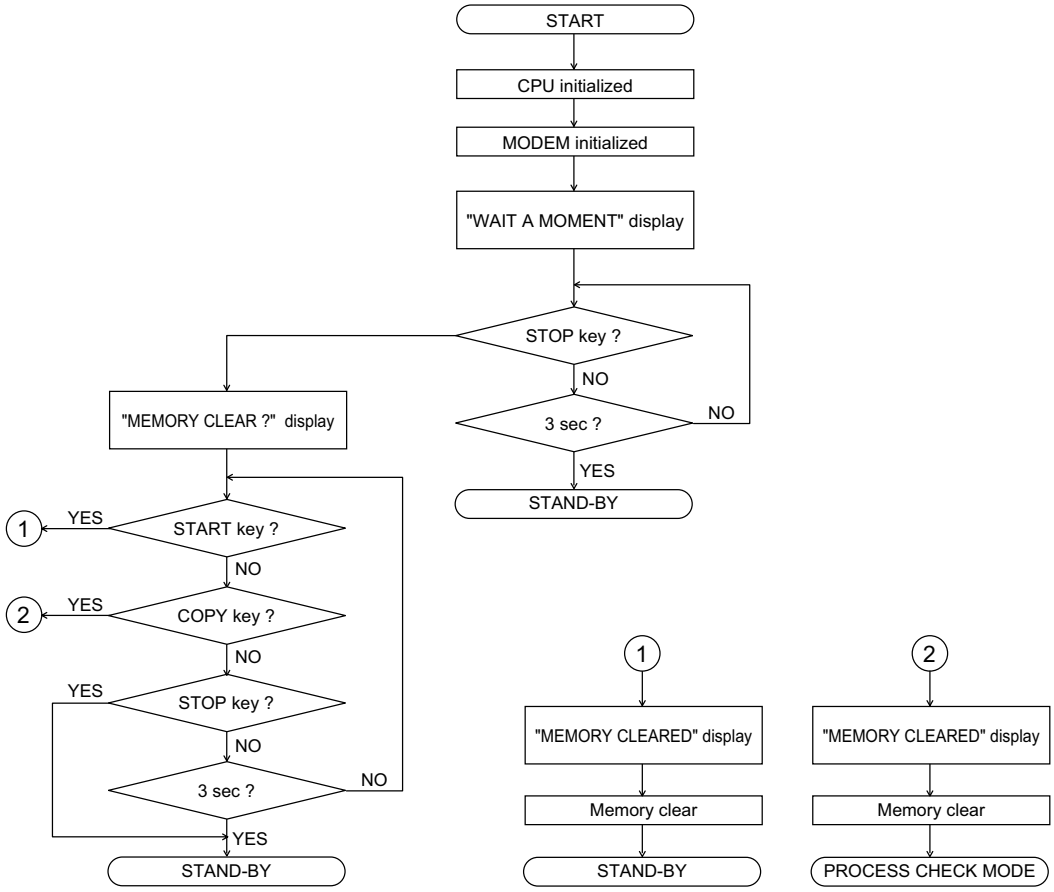


# CHAPTER 7. OPERATION FLOWCHART

## [1] Protocol



## [2] Power on sequence



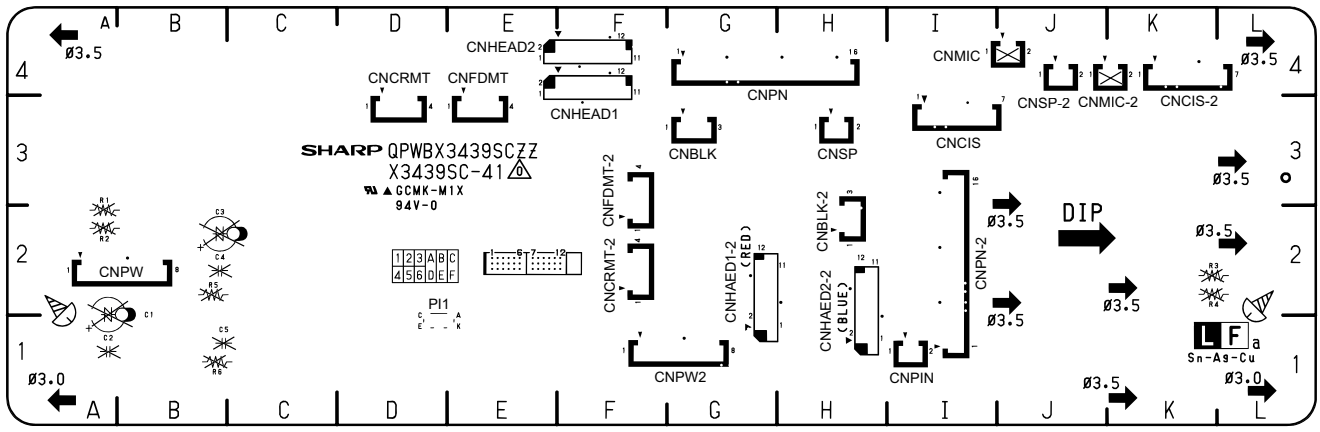
# CHAPTER 8. OTHER

## [1] Service tools

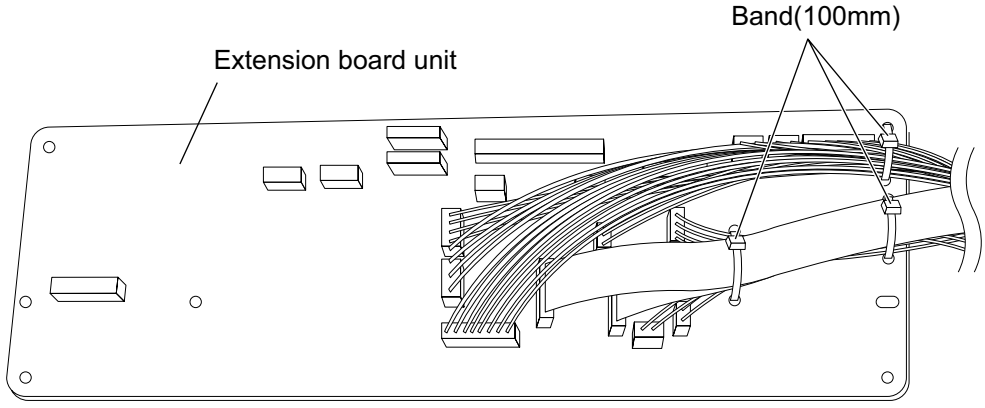
### 1. List

| NO. | PARTS CODE | DESCRIPTION | QTY | PRICE RANK |
|---|---|---|---|---|
| 1 | CPWBX3439SC01 | Extension board unit | 1 | CE |
| 2 | PSHEZ3579SCZZ | Shading wave memory standard paper | 1 | AD |
| 3 | LBNDJ2006XHZZ | Band(100mm) | 3 | AA |
| 4 | QCNWG223CSCZZ | CIS EXTENSION CABLE (7PIN) [CNCIS/CNCIS-2] | 1 | AY |
| 5 | QCNWG224CSCZZ | PANEL EXTENSION CABLE (16PIN) [CNPN/CNPN-2] | 1 | BB |
| 6 | QCNWG225CSCZZ | SPEAKER EXTENSION CABLE (2PIN) [CNSP/CNSP-2] | 1 | AR |
| 7 | QCNWG232CSCZZ | BLK EXTENSION CABLE (3PIN) [CNBLK/CNBLK-2] | 1 | AS |
| 8 | QCNWG226CSCZZ | POWER SUPPLY EXTENSION CABLE (8PIN) [CNPW/CNPW-2] | 1 | AY |
| 9 | QCNWG227CSCZZ | FEED MOTOR EXTENSION CABLE (4PIN) [CNFDMT/CNFDMT-2] | 1 | AU |
| 10 | QCNWG228CSCZZ | CARRIER MOTOR EXTENSION CABLE (4PIN) [CNCRMT/CNCRMT-2] | 1 | AU |
| 11 | QCNWG229CSCZZ | INK 1 EXTENSION CABLE (12PIN) [CNHEAD1/CNHEAD1-2] | 1 | AY |
| 12 | QCNWG230CSCZZ | INK 2 EXTENSION CABLE (12PIN) [CNHEAD2/CNHEAD2-2] | 1 | AY |
| 13 | QCNWG231CSCZZ | PIN EXTENSION CABLE (2PIN) [CNPIN] | 1 | AX |
| 14 | QCNWG233CSCZZ | MIC EXTENSION JOINT CABLE (3PIN) [CNMIC] | 1 | AQ |

#### 1.1. Extension board unit




#### 1.2. Position of band



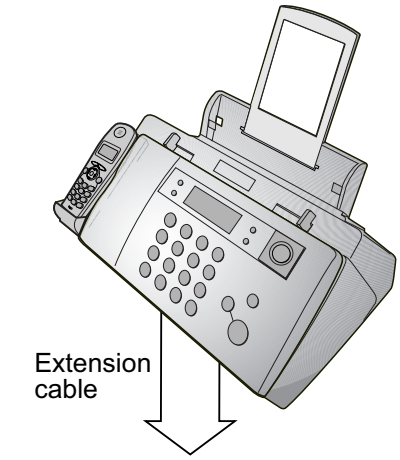
## 2. Relay board unit

### 2.1. Relay board unit

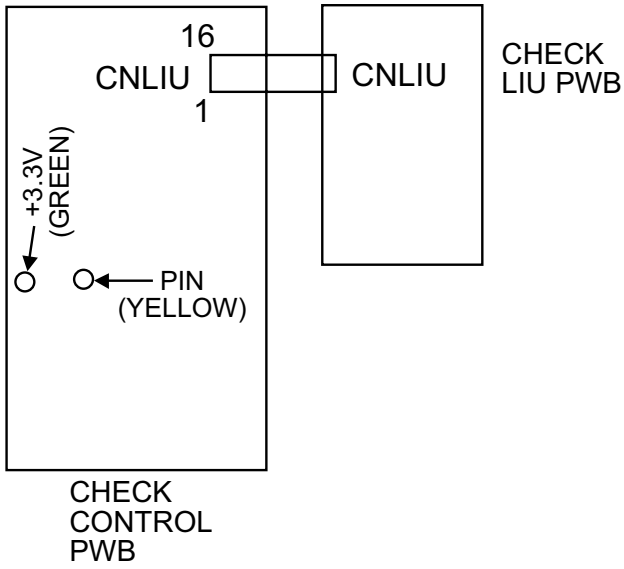
1. Remove the LIU, Control PWB and Power Supply PWB from this unit, and mount the board unit instead.

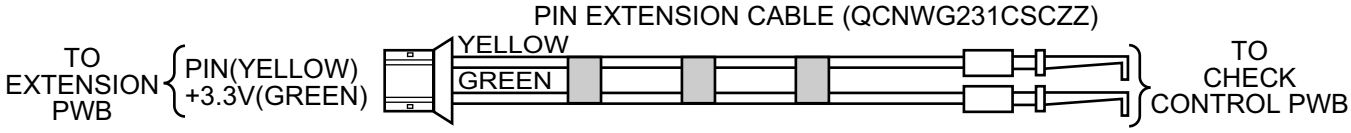
   Before connecting the wiring to the relay board unit, set the test PWB switches to the fixed position.

2. The setting is as follows.




· The extension cables are used as one pair.



### 3. Shading paper

- The white and black basis is applied to remember the shading waveform. Be sure to perform this operation when replacing the battery or replacing the control PWB. Execute in the shading mode of DIAG mode.

**SHADING WAVE MEMORY STANDARD PAPER (PSHEZ3579SCZZ)**

## [2] Rewriting version up the FLASH ROM

Refer to the service manual of UX-B30H.

**- MEMO -**

# SHARP PARTS GUIDE

# MODEL UX-BD80 UX-BD90

| MODEL | SELECTION CODE | DESTINATION |
|---|---|---|
| UX-BD80/90 | DE | Germany |
| UX-BD80/90 | H | U.K. |
| UX-BD80 | IT | Italy |

| Cordless Handset x 1pc. | Cordless Handset x 2pcs. |
|---|---|
| UX-BD80 | UX-BD90 |

CONTENTS


[1] Cabinet,etc.

[2] Operation panel unit/Document guide upper

[3] Packing material & Accessories

[4] Control PWB unit

[5] LIU PWB unit

[6] Power supply PWB unit

[7] Operation panel PWB unit

[8] Ink PWB unit

■ INDEX

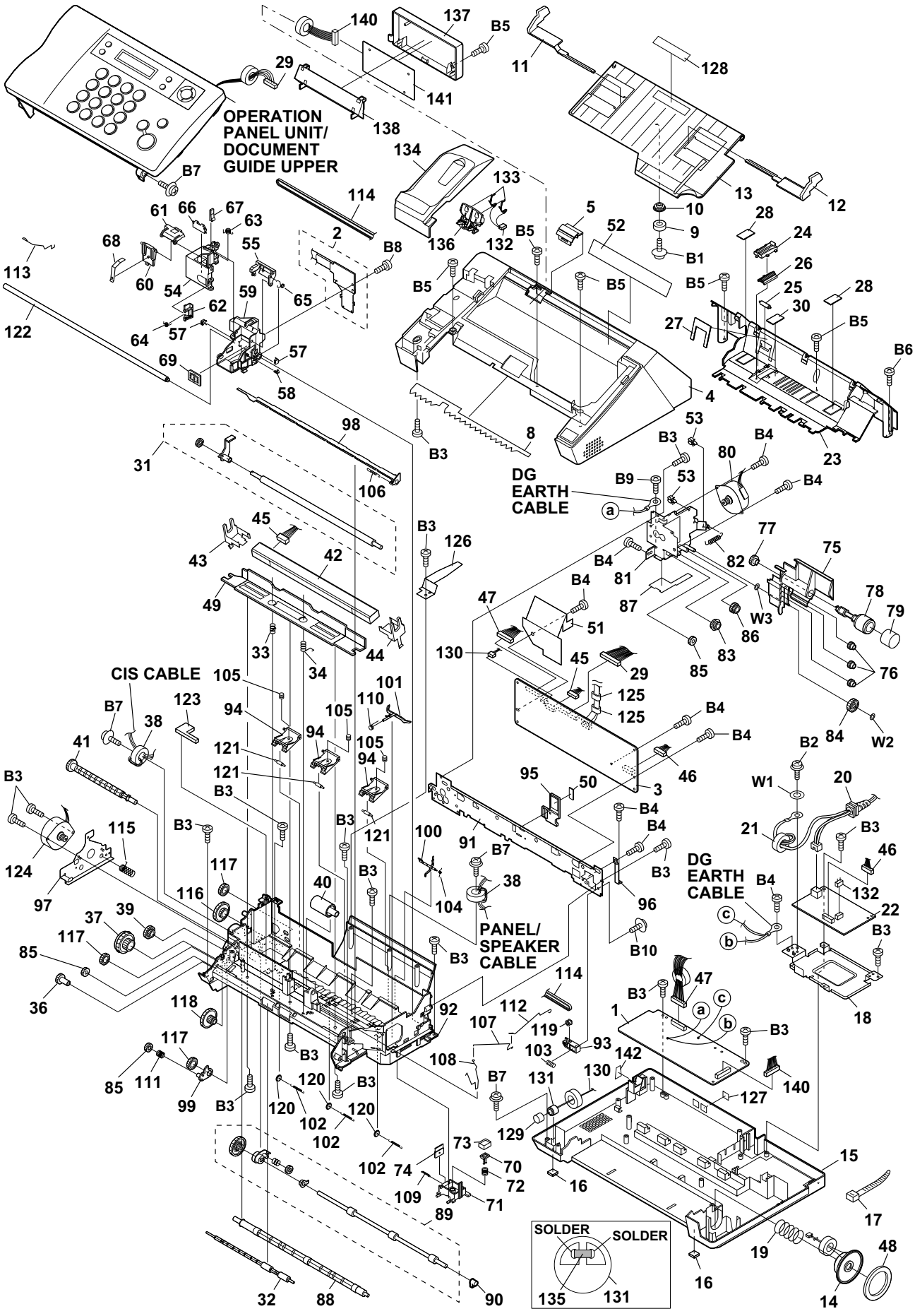

**PRICE RANK ** MARK : SPARE PARTS - DELIVERY SECTION**
**EUROPE PARTS CENTER**

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

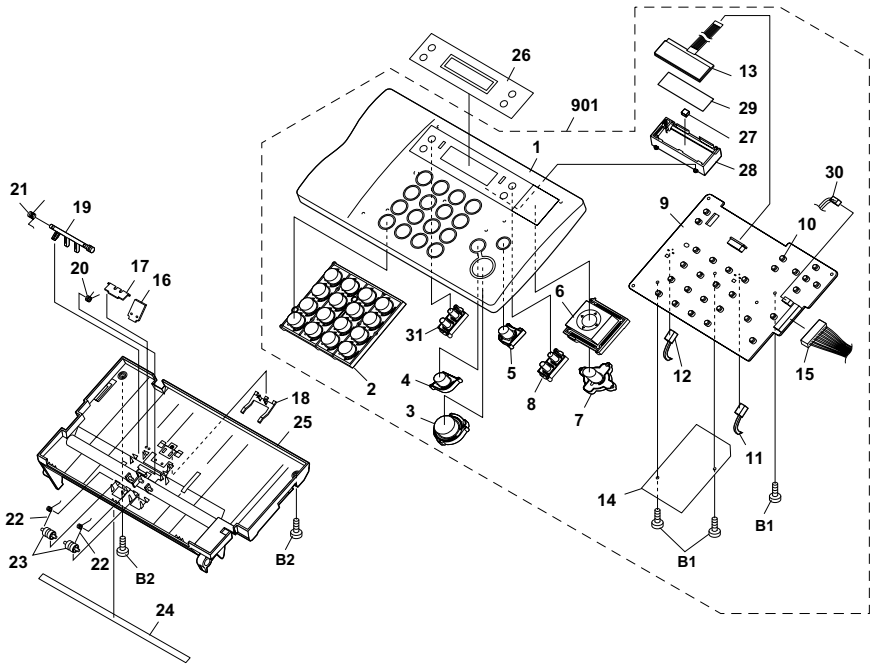
## [1] Cabinet,etc.



| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| **[1] Cabinet,etc.** | | | | | |
| 1 | DCEKL293DXH01 | BG | N | E | LIU PWB unit |
| 2 | DCEKi256DXH01 | BG | | E | Ink PWB unit with FPC |
| 3 | DCEKC588UXHZZ | CA | N | E | Control PWB unit(Within ROM)(80DE/90DE) |
| 3 | DCEKC680UXHZZ | CA | N | E | Control PWB unit(Within ROM)(80H/90H) |
| 3 | DCEKC681UXHZZ | | N | E | Control PWB unit(Within ROM)(80IT) |
| 4 | GCABA2440XHSB | AY | | D | Top cabinet |
| 5 | GCOVA2502XHSA | AF | | C | Download cover |
| 8 | PSHEZ3873XHZZ | | N | C | Static sheet |
| 9 | PSPO-2023XHZZ | AE | | C | Hopper cushion |
| 10 | NGERP2318XHZZ | AD | | C | Pinion gear |
| 11 | PGiDM2670XHSA | AF | | C | Hopper guide,left |
| 12 | PGiDM2671XHSA | AG | | C | Hopper guide,right |
| 13 | PGiDM2672XHSA | AQ | | C | Document guide lower |
| 14 | CCNWN202CXH01 | AN | | C | Speaker ass'y |
| 15 | GCABB2441XHSB | AX | | D | Bottom cabinet |
| 16 | GLEGG2088XHZZ | AE | | C | Rubber leg |
| 17 | LBNDJ2006XHZZ | AA | | C | Band(100mm) |
| 18 | LPLTM3317XHZZ | AL | | C | Shield plate |
| 19 | MSPRC3470XHZZ | AF | | C | Speaker spring |
| ⚠ 20 | QACCE2082XHZZ | AX | N | B | AC cord(80DE/IT/90DE) |
| ⚠ 20 | QACCB2080XHZZ | BA | N | B | AC cord(80H/90H) |
| ⚠ 21 | RCORF2147XHZZ | AG | | B | Core |
| ⚠ 22 | RDENT2219XHZZ | BH | N | E | Power supply PWB unit |
| 23 | GCOVA2501XHSE | AV | N | C | ASF cover |
| 24 | LPLTP3321XHZZ | AE | | C | Housing buckler B |
| 25 | NROLP2492XHZZ | AT | | C | Idler roller |
| 26 | PGUMS2196XHZZ | AG | | C | Housing buckler rubber |
| 27 | PSHEZ3817XHZZ | AF | | C | Friction pad |
| 28 | PSHEZ3828XHZZ | AF | | C | ASF cover sheet |
| 29 | QCNWN498BXHZZ | AR | | C | Panel cable |
| 30 | PSHEZ3842XHZZ | AF | | C | Buckler sheet |
| 31 | CROLR2518XH01 | AX | | C | Back roller ass'y |
| 32 | CROLP2499XH02 | AL | | C | Exit roller ass'y |
| 33 | MSPRC3488XHZZ | AE | | C | CIS spring,left |
| 34 | MSPRC3489XHZZ | AE | | C | CIS spring,right |
| 36 | NGERH2636XHZZ | AF | | C | Document PO gear,21Z |
| 37 | NGERH2637XHZZ | AF | | C | Reduction gear,25/50Z |
| ⚠ 38 | RCORF2146XHZZ | AG | | B | Core |
| 39 | NGERH2639XHZZ | AF | | C | Reduction gear,16/28Z |
| 40 | NROLR2483XHZZ | AL | | C | Paper feed roller |
| 41 | NSFTP2385XHZZ | AF | | C | Paper feed shaft |
| 42 | RUNTZ2145XHZZ | BN | | B | CIS unit |
| 43 | LHLDZ2276XHZZ | AF | | C | CIS holder,left |
| 44 | LHLDZ2277XHZZ | AF | | C | CIS holder,right |
| 45 | QCNWN280CXHZZ | AN | | C | CIS cable |
| 46 | QCNWN200CXHZZ | AL | | C | Power supply cable |
| 47 | QCNWN345CXHZZ | | N | C | LIU cable |
| 48 | PSPO-2022XHZA | | N | C | Speaker cushion |
| 49 | LPLTP3334XHZZ | AL | | C | CIS plate |
| 50 | PTPEH2114XHZZ | AC | | C | FFC tape |
| 51 | PSHEZ3840XHZZ | AF | | C | Control PWB protect sheet |
| 52 | TLABH441HXHZZ | AE | | D | Ink exchange label |
| 53 | LHLDW2290XHZZ | AE | | C | Cable clip |
| 54 | GCOVA2465XHZA | AL | | C | C/T front cover |
| 55 | GCOVA2466XHZZ | AG | | C | C/T top cover |
| 57 | LHLDZ2221XHZZ | AD | | C | FPC stopper,side |
| 58 | LHLDZ2222XHZZ | AD | | C | FPC stopper,bottom |
| 59 | LHLDZ2245XHZB | AL | | C | Carrier |
| 60 | LHLDZ2246XHZZ | AE | | C | C/T front holder |
| 61 | LHLDZ2247XHZZ | AG | | C | C/T top holder |
| 62 | MLEVP2377XHZZ | AE | | C | C/T lock lever |
| 63 | MSPRD3382XHZZ | AE | | C | Front cover spring |
| 64 | MSPRD3383XHZZ | AE | | C | Lock lever spring |
| 65 | MSPRD3413XHZZ | AE | | C | Top cover spring |
| 66 | MSPRP3279XHZZ | AE | | C | C/T lock spring |
| 67 | MSPRP3384XHZZ | AG | | C | C/T side spring |
| 68 | MSPRP3388XHZZ | AE | | C | Top holder spring |
| 69 | PGUMS2188XHZZ | AC | | C | Support rubber |
| 70 | LHLDZ2215XHZZ | AE | | C | Cap holder |
| 71 | LHLDZ2278XHZZ | AG | | C | Sled holder |
| 72 | MSPRC3362XHZZ | AD | | C | Cap spring |
| 73 | PCAPH2090XHZZ | AE | | C | Cap |
| 74 | PGUMM2189XHZZ | AE | | C | Wiper |
| 75 | LFRM-2258XHZZ | AL | | C | Pick roller frame |
| 76 | NGERH2564XHZZ | AE | | C | Gear,pick A |
| 77 | NGERH2565XHZZ | AE | | C | Gear,pick B |
| 78 | NROLP2478XHZZ | AE | | C | Pickup roller |
| 79 | PGUMR2186XHZA | AG | | C | Pick tire |
| 80 | CMOTZ2192XH01 | AX | | B | Carrier motor ass'y |
| 81 | LPLTM3328XHZZ | AX | | C | ASF frame |
| 82 | MSPRC3465XHZZ | AE | | C | Pick spring |
| 83 | NGERH2392XHZZ | AC | | C | Reduction gear,17/21Z |
| 84 | NGERH2563XHZZ | AE | | C | Gear,ASF D |
| 85 | NGERH2611XHZZ | AE | | C | Idler gear,18Z |

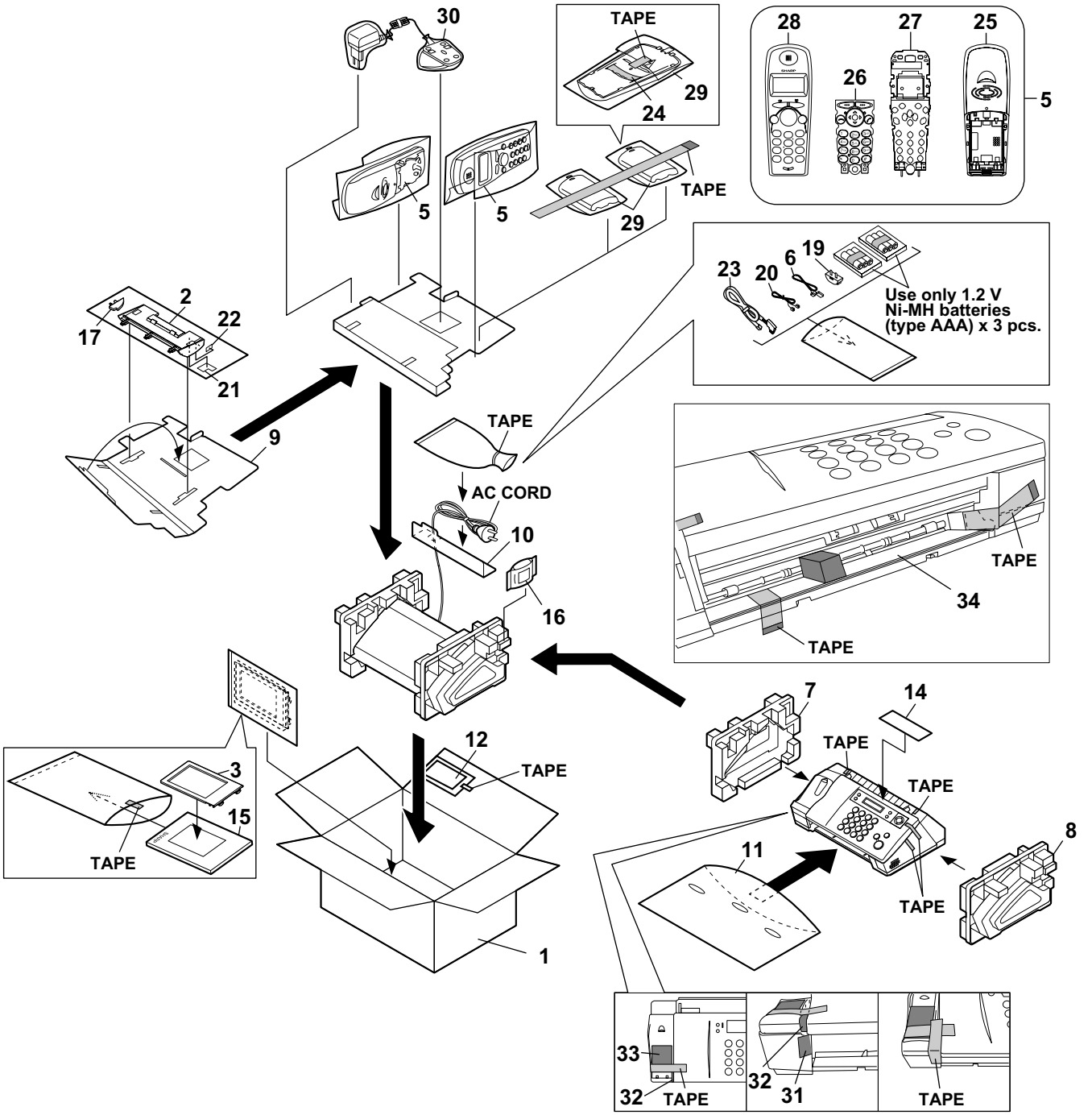
| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| **[1] Cabinet,etc.** | | | | | |
| 86 | NGERH2633XHZZ | AF | | C | ASF gear,22/23Z |
| 87 | PSHEZ3829XHZZ | AF | | C | Insulation sheet |
| 88 | CROLP2517XH02 | AW | | C | Exit roller ass'y |
| 89 | CROLR2516XHT1 | AU | | C | Feed roller ass'y |
| 90 | LBSHP2157XHZZ | AE | | C | Roller bearing |
| 91 | LCHSM2078XHZZ | AP | | C | Frame chassis |
| 92 | LFRM-2257XHZZ | AY | | C | Main frame |
| 93 | LHLDZ2291XHZZ | AE | | C | Idler Holder |
| 94 | LHLDZ2275XHZZ | AF | | C | Press roller holder |
| 95 | LHLDZ2288XHZZ | AF | | C | FFC clamper |
| 96 | LPLTM3316XHZZ | AF | | C | Earth plate |
| 97 | LPLTM3329XHZZ | AX | | C | Motor heat sink |
| 98 | MARMP2036XHZZ | AF | | C | Change arm |
| 99 | MARMP2037XHZZ | AE | | C | Friction arm |
| 100 | MLEVP2396XHZZ | AF | | C | Sensor lever |
| 101 | MLEVP2397XHZZ | AF | | C | Latch lever |
| 102 | MSPRC3360XHZZ | AE | | C | Star wheel spring |
| 103 | MSPRC3490XHZZ | AE | | C | Idler pulley spring |
| 104 | MSPRC3458XHZZ | AE | | C | Sensor lever spring |
| 105 | MSPRC3459XHZZ | AE | | C | Press roller spring |
| 106 | MSPRC3460XHZZ | AE | | C | Change arm spring |
| 107 | MSPRK3558XHZZ | AE | | C | Earth spring 2 |
| 108 | MSPRC3462XHZZ | AE | | C | Earth spring 1 |
| 109 | MSPRC3463XHZZ | AE | | C | Sled spring |
| 110 | MSPRC3464XHZZ | AE | | C | Latch lever spring |
| 111 | MSPRC3387XHZZ | AD | | C | Friction arm spring |
| 112 | MSPRK3503XHZZ | AF | | C | Carrier spring,right |
| 113 | MSPRK3502XHZZ | AF | | C | Carrier spring,left |
| 114 | NBLTT2065XHZZ | AR | | C | Carrier belt |
| 115 | MSPRC3457XHZZ | AE | | C | Feed gear spring |
| 116 | NGERH2634XHZZ | AF | | C | Reduction gear 1,29/67Z |
| 117 | NGERH2638XHZZ | AF | | C | Idler gear,26Z |
| 118 | NGERH2643XHZZ | AF | | C | Exit roller gear,17/60Z |
| 119 | NPLYD2095XHZZ | AE | | C | Idler pulley |
| 120 | NROLM2480XHZZ | AE | | C | Star wheel |
| 121 | NROLP2477XHZZ | AE | | C | Press roller |
| 122 | NSFTM2384XHZZ | AR | | C | Carrier shaft |
| 123 | PFLT-2030XHZZ | AE | | C | Ink felt |
| 124 | RMOTS2193XHZZ | AX | | B | Feed motor |
| ⚠ 125 | RCORF0049CFZZ | AR | | B | Core |
| 126 | PSHEZ3874XHZZ | | N | C | ASF guide sheet |
| 127 | PSHEZ3410XHZZ | AB | | C | Jack sheet |
| 128 | TLABH388HXHGZ | AG | | D | Maximum 10 label(80DE/90DE) |
| 128 | TLABH393HXHiZ | AG | | D | Maximum 10 label(80IT) |
| 129 | PGUMM2212XHZZ | AG | | C | Mic cushion |
| 130 | QCNWN350CXHZZ | | N | C | Mic cable |
| 131 | RMiCC2025XHZZ | AL | N | B | Mic |
| 132 | QCNWN310CXHZZ | | N | C | Charger cable |
| 133 | QTANB2057XHZZ | AQ | | C | Charger terminal |
| 134 | GCOVA2518XHSA | AQ | N | C | Charger cover |
| 135 | VCCCTV1HH221J | AA | | C | Capacitor(50WV 220PF) |
| 136 | LHLDZ2301XHZZ | AK | N | C | Charger terminal holder |
| 137 | GCASP2193XHSA | AL | N | C | Cordless PWB case |
| 138 | GCOVA2519XHSA | AK | N | C | Cordless PWB cover |
| 140 | QCNWN309CXHZZ | AL | N | C | Cordless PWB cable |
| 141 | RUNTZ2134SCS2 | ** | N | E | Cordless PWB unit |
| 142 | PSHEZ3836XHZZ | AM | | C | Handset jack sheet |
| B1 | LX-BZ2308XHZZ | AE | | C | Screw with washer(3x10) |
| B2 | LX-BZ2282XHZZ | AB | | C | Screw with washer(4x6) |
| B3 | XEBS730P10000 | AC | | C | Screw(3x10) |
| B4 | XHBS730P06000 | AC | | C | Screw(3x6) |
| B5 | XEBS730P12000 | AC | | C | Screw(3x12) |
| B6 | XHBS730P10000 | AD | | C | Screw(3x10) |
| B7 | LX-BZ2205XHZZ | AC | | C | Screw(3x10) |
| B8 | XEPS726P04000 | AD | | C | Screw(2.6x4) |
| B9 | XUPS730P10XS0 | AD | N | C | Screw(3x10) |
| B10 | LX-BZ2331XHZZ | AD | | C | Screw with washer |
| W1 | XWHSN40-08100 | AA | | C | Washer |
| W2 | LX-WZ2273XHZZ | AE | | C | Washer |
| W3 | LX-WZ2309XHZZ | AE | | C | Washer |

## [2] Operation panel unit/Document guide upper




| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| **[2] Operation panel unit/Document guide upper** | | | | | | |
| 1 | GCASP2187XHSP | BC | N | D | Panel case(80DE/90DE) | |
| 1 | GCASP2187XHSQ | BC | N | D | Panel case(80H/90H) | |
| 1 | GCASP2187XHSR | | N | D | Panel case(80IT) | |
| 2 | JBTN-2463XHSM | AN | N | C | 12 key | |
| 3 | JBTN-2464XHSB | AG | | C | Start key(80DE/IT/90DE) | |
| 3 | JBTN-2464XHSA | AG | | C | Start key(80H/90H) | |
| 4 | JBTN-2465XHSB | AF | | C | Stop key(80DE/IT/90DE) | |
| 4 | JBTN-2465XHSA | AF | | C | Stop key(80H/90H) | |
| 5 | JBTN-2466XHSB | AF | | C | Copy key(80DE/IT/90DE) | |
| 5 | JBTN-2466XHSA | AF | | C | Copy key(80H/90H) | |
| 6 | JBTN-2467XHSA | AF | | C | Function key | |
| 7 | JBTN-2468XHSA | AL | | C | Cursol key | |
| 8 | JBTN-2469XHSA | AP | | C | Ink set key | |
| 9 | DCEKP275DXH01 | BC | N | E | Operation panel PWB unit | |
| 10 | QSW-K0005AWZZ | AC | | C | Tact switch | [SW] |
| ⚠ 11 | QSW-M2246AXZZ | AH | | C | FRSNS sensor | [SW1] |
| ⚠ 12 | QSW-M2294XHZZ | AE | | C | ORGSNS sensor | [SW2] |
| 13 | RUNTZ2138XHZZ | BG | | B | LCD | |
| 14 | PSHEZ3830XHZZ | AE | | C | Protection sheet | |
| 15 | QCNWN498BXHZZ | AR | | C | Panel cable | |
| 16 | LPLTG3311XHZZ | AF | | C | Separate rubber | |
| 17 | LPLTP3312XHZZ | AE | | C | Separate plate | |
| 18 | LPLTP3313XHZZ | AE | | C | Paper feed plate | |
| 19 | LPLTP3314XHZZ | AE | | C | Sub feed plate | |
| 20 | MSPRC3455XHZZ | AE | | C | Separate spring | |
| 21 | MSPRC3456XHZZ | AE | | C | Sub feed spring | |
| 22 | MSPRD3495XHZZ | AE | | C | PO pinch roller spring | |
| 23 | NROLP2332XHZZ | AD | | C | PO pinch roller | |
| 24 | PBRS-2066XHZZ | AV | | C | Static brush | |
| 25 | PGIDM2669XHZZ | AS | | C | Document guide upper | |
| 26 | HPNLH2444XHST | AL | N | D | Decoration panel(80DE) | |
| 26 | HPNLH2444XHSU | AL | N | D | Decoration panel(80H) | |
| 26 | HPNLH2444XHSV | | N | D | Decoration panel(80IT) | |
| 26 | HPNLH2444XHSW | AN | N | D | Decoration panel(90DE) | |
| 26 | HPNLH2444XHSX | | N | D | Decoration panel(90H) | |
| 27 | GLEGG2078XHZZ | AD | | C | Rubber | |
| 28 | LHLDZ2298XHZZ | AM | N | C | LCD holder | |
| 29 | PSHEZ3857XHZZ | | N | C | LCD reflect sheet | |
| 30 | QCNWN290CXHZZ | AG | N | C | Backlight cable | |
| 31 | JBTN-2469XHSA | AP | | C | TAD key | |
| B1 | XEBS720P06000 | AC | | C | Screw(2x6) | |
| B2 | XEBS730P10000 | AC | | C | Screw(3x10) | |
| | (Unit) | | | | | |
| 901 | DCEKP254DXH16 | BT | N | E | Operation panel unit(80DE/90DE) | |
| 901 | DCEKP254DXH17 | BT | N | E | Operation panel unit(80H/90H) | |
| 901 | DCEKP254DXH18 | | N | E | Operation panel unit(80IT) | |

## [3] Packing material & Accessories




| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| **[3] Packing material & Accessories** | | | | | |
| 1 | CPAKC297GXH01 | | N | D | Packing case with label(80DE) |
| 1 | CPAKC297GXH02 | | N | D | Packing case with label(80H) |
| 1 | CPAKC297GXH03 | | N | D | Packing case with label(80IT) |
| 1 | CPAKC298GXH01 | | N | D | Packing case with label(90DE) |
| 1 | CPAKC298GXH02 | | N | D | Packing case with label(90H) |
| 2 | LPLTP3318XHZZ | AP | | D | Paper tray(80DE/IT) |
| 2 | LPLTP3318XHZA | | | D | Paper tray(80H) |
| 3 | CPLTP3222XHR3 | BA | | D | Paper tray extension ass'y |
| 5 | RUNT-220DXH04 | ** | N | E | Cordless handset unit(No.25~28):Local supply |
| ⚠ 6 | QCNW-281AXHZZ | AL | | C | Telephone line cord(80H/90H) |
| 7 | SPAKA296GXHZZ | | N | D | Packing add.,left |
| 8 | SPAKA314GXHZZ | | N | D | Packing add.,right |
| 9 | SPAKA295GXHZZ | | N | D | Pad,A |
| 10 | SPAKA451FXHZZ | AE | | D | Pad,B |
| 11 | SPAKP449FXHZZ | AG | | D | Vinyl cover |
| 12 | TGANE2220XHZZ | AK | | D | Warranty card(80H/90H) |

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| **[3] Packing material & Accessories** | | | | | |
| 14 | TCADZ3778XHZZ | | N | D | Pop card(80DE) |
| 14 | TCADZ3757XHZZ | | N | D | Pop card(90DE) |
| 14 | TCADZ3758XHZZ | | N | D | Pop card(80H/90H) |
| 14 | TCADZ3759XHZZ | | N | D | Pop card(80IT) |
| 15 | TiNSG4472XHTZ | AS | N | D | Operation manual(80DE/90DE) |
| 15 | TiNSE4473XHTZ | BC | N | D | Operation manual(80H/90H) |
| 15 | TiNSi4474XHTZ | | N | D | Operation manual(80IT) |
| 16 | UiNK-2034XHZZ | AE | | S | Print cartridge(Intial cartridge) |
| 17 | PGiDM2673XHZZ | AE | | C | A4 paper guide |
| 19 | QPLGJ2019XHZZ | AN | | C | Adapter(80IT) |
| ⚠ 20 | QCNWG370BXHZZ | AL | | C | Telephone line cord(80IT) |
| 21 | TLABH442HXHZZ | AK | | D | Paper set label(H) |
| 22 | TLABH221JXHZZ | | | D | Paper limit label(H) |
| 23 | QCNW-4649XHZZ | AE | | C | Telephone line cord(80DE/90DE) |
| 24 | TLABZ491GXHZZ | AE | | D | Battery caution label(80DE/90DE) |
| 24 | TLABZ492GXHZZ | AE | | D | Battery caution label(80H/90H) |
| 24 | TLABZ499GXHZZ | | | D | Battery caution label(80IT) |
| 25 | GCABB2429SCS2 | ** | N | D | Cordless handset rear cabinet |
| 26 | QCNTM2050SCS1 | ** | | C | Cordless handset rubber key |
| 27 | RUNTZ2144SCS1 | ** | | E | Cordless handset PWB unit |
| 28 | GCABA2428SCS2 | ** | N | D | Cordless handset front cabinet |
| 29 | GFTAB2139SCS2 | ** | N | C | Cordless handset battery cover |
| ⚠ 30 | RUiTZ2009XH02 | BK | N | E | Cordless handset charger(90DE) |
| ⚠ 30 | RUiTZ2009XH01 | | N | E | Cordless handset charger(90H) |
| 31 | SPAKA354GXHZZ | | N | D | Protection A |
| 32 | SPAKA353GXHZZ | | N | D | Protection B |
| 33 | SPAKA364GXHZZ | | N | D | Protection C |
| 34 | SPAKA365GXHZZ | | N | D | Protection D |
| **[4] Control PWB unit** | | | | | |
| 1 | UBATL2049SCZZ | AF | | B | Battery(CR2032T23) [BAT1] |
| 2 | VCEAGA1HW226M | AB | | C | Capacitor(50WV 22μ F) [C3] |
| 3 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) [C4] |
| 4 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μ F) [C5] |
| 5 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μ F) [C6] |
| 6 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μ F) [C7] |
| 7 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) [C8] |
| 8 | VCEAGA1EW476M | AA | | C | Capacitor(25WV 47μ F) [C9] |
| 9 | VCCCCY1HH470J | AA | | C | Capacitor(50WV 47PF) [C11] |
| 10 | VCCCCY1HH330J | AA | | C | Capacitor(50WV 33PF) [C12] |
| 11 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μ F) [C13] |
| 12 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μ F) [C14] |
| 13 | VCEAGA1HW226M | AB | | C | Capacitor(50WV 22μ F) [C15] |
| 14 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [C16] |
| 15 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [C18] |
| 16 | VCKYTV1AF106Z | AC | | C | Capacitor(10WV 10μ F) [C19] |
| 17 | VCKYTV1AF106Z | AC | | C | Capacitor(10WV 10μ F) [C20] |
| 18 | VCKYTV1AF106Z | AC | | C | Capacitor(10WV 10μ F) [C21] |
| 19 | VCKYTV1AF106Z | AC | | C | Capacitor(10WV 10μ F) [C22] |
| 20 | VCEAGA1HW107M | AA | | C | Capacitor(50WV 100μ F) [C23] |
| 21 | VCEAGA1HW476M | AB | | C | Capacitor(50WV 47μ F) [C24] |
| 22 | VCEAGA1HW476M | AB | | C | Capacitor(50WV 47μ F) [C25] |
| 23 | VCKYCY1HB103K | AA | | C | Capacitor(50WV 0.01μ F) [C26] |
| 24 | VCEAGA1EW107M | AB | | C | Capacitor(25WV 100μ F) [C27] |
| 25 | VCEAGA1EW476M | AA | | C | Capacitor(25WV 47μ F) [C28] |
| 26 | VCEAGA1EW476M | AA | | C | Capacitor(25WV 47μ F) [C29] |
| 27 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μ F) [C30] |
| 28 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) [C31] |
| 29 | VCEAGA1EW476M | AA | | C | Capacitor(25WV 47μ F) [C32] |
| 30 | VCEAGA1EW476M | AA | | C | Capacitor(25WV 47μ F) [C33] |
| 31 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) [C34] |
| 32 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [C35] |
| 33 | VCEAGA1EW227M | AB | | C | Capacitor(25WV 220μ F) [C37] |
| 34 | VCEAGA1HW107M | AA | | C | Capacitor(50WV 100μ F) [C38] |
| 35 | VCEAGA1HW226M | AB | | C | Capacitor(50WV 22μ F) [C39] |
| 36 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) [C45] |
| 37 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) [C46] |
| 38 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) [C47] |
| 39 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) [C48] |
| 40 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) [C49] |
| 41 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) [C50] |
| 42 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) [C51] |
| 43 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) [C53] |
| 44 | VCKYCY1CB104K | AB | | C | Capacitor(16WV 0.1μ F) [C54] |
| 45 | VCKYCY1CB104K | AB | | C | Capacitor(16WV 0.1μ F) [C55] |
| 46 | VCKYCY1AB105K | AB | | C | Capacitor(10WV 1μ F) [C58] |
| 47 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) [C59] |
| 48 | VCKYCY1HB222K | AA | | C | Capacitor(50WV 2200PF) [C60] |
| 49 | VCKYCY1CB104K | AB | | C | Capacitor(16WV 0.1μ F) [C61] |
| 50 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) [C62] |
| 51 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) [C63] |
| 52 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) [C64] |
| 53 | VCKYCY1HB472K | AA | | C | Capacitor(50WV 4700PF) [C65] |
| 54 | VCKYCY1HB103K | AA | | C | Capacitor(50WV 0.01μ F) [C66] |
| 55 | VCKYCY1CB104K | AB | | C | Capacitor(16WV 0.1μ F) [C67] |

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| **[4] Control PWB unit** | | | | | |
| 56 | VCKYCY1AB105K | AB | | C | Capacitor(10WV 1μF) [C68] |
| 57 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C100] |
| 58 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C101] |
| 59 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C102] |
| 60 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C103] |
| 61 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C104] |
| 62 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C105] |
| 63 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C107] |
| 64 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C108] |
| 65 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C109] |
| 66 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C110] |
| 67 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C111] |
| 68 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) [C112] |
| 69 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) [C113] |
| 70 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C114] |
| 71 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [C115] |
| 72 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C116] |
| 73 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C117] |
| 74 | VCCCCY1HH8R0D | AA | | C | Capacitor(50WV 8PF) [C118] |
| 75 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C119] |
| 76 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C123] |
| 77 | VCCCCY1HH220J | AA | | C | Capacitor(50WV 22PF) [C124] |
| 78 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C125] |
| 79 | VCCCCY1HH180J | AA | | C | Capacitor(50WV 18PF) [C126] |
| 80 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C127] |
| 81 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C128] |
| 82 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C129] |
| 83 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C130] |
| 84 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C131] |
| 85 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C133] |
| 86 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C134] |
| 87 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C135] |
| 88 | VCKYCY1HB103K | AA | | C | Capacitor(50WV 0.01μF) [C137] |
| 89 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C139] |
| 90 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C140] |
| 91 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C142] |
| 92 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C143] |
| 93 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [C144] |
| 94 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C145] |
| 95 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C146] |
| 96 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C147] |
| 97 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C148] |
| 98 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C149] |
| 99 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C150] |
| 100 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C151] |
| 101 | VCCCCY1HH220J | AA | | C | Capacitor(50WV 22PF) [C152] |
| 102 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) [C153] |
| 103 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C157] |
| 104 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C158] |
| 105 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C159] |
| 106 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C160] |
| 107 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) [C161] |
| 108 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C162] |
| 109 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C163] |
| 110 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C164] |
| 111 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [C165] |
| 112 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C166] |
| 113 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C167] |
| 114 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C168] |
| 115 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C169] |
| 116 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C170] |
| 117 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C171] |
| 118 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C172] |
| 119 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C175] |
| 120 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C176] |
| 121 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C177] |
| 122 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C178] |
| 123 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C179] |
| 124 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C180] |
| 125 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) [C181] |
| 126 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) [C182] |
| 127 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) [C183] |
| 128 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C184] |
| 129 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C185] |
| 130 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C186] |
| 131 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) [C187] |
| 132 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C188] |
| 133 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [C190] |
| 134 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [C191] |
| 135 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C192] |
| 136 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [C193] |
| 137 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μF) [C194] |
| 138 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [C195] |
| 139 | VCKYCY1CB104K | AB | | C | Capacitor(16WV 0.1μF) [C196] |
| 140 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [C197] |

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| **[4] Control PWB unit** | | | | | | |
| 141 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C198] |
| 142 | VCKYCY1AB105K | AB | | C | Capacitor(10WV 1μ F) | [C199] |
| 143 | VCKYCY1AB105K | AB | | C | Capacitor(10WV 1μ F) | [C200] |
| 144 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C201] |
| 145 | VCKYCY1HB103K | AA | | C | Capacitor(50WV 0.01μ F) | [C203] |
| 146 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C206] |
| 147 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C210] |
| 148 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C211] |
| 149 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C212] |
| 150 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C215] |
| 151 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C218] |
| 152 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C219] |
| 153 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μ F) | [C220] |
| 154 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μ F) | [C222] |
| 155 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C223] |
| 156 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) | [C224] |
| 157 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C225] |
| 158 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C226] |
| 159 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C227] |
| 160 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C228] |
| 161 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C229] |
| 162 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C230] |
| 163 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C231] |
| 164 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C232] |
| 165 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C233] |
| 166 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C234] |
| 167 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C235] |
| 168 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C236] |
| 169 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C238] |
| 170 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C239] |
| 171 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) | [C240] |
| 172 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C241] |
| 173 | VCKYTV1AF106Z | AC | | C | Capacitor(10WV 10μ F) | [C242] |
| 174 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C243] |
| 175 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C254] |
| 176 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C255] |
| 177 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C256] |
| 178 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C258] |
| 179 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C259] |
| 180 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C263] |
| 181 | VCKYCY1HB222K | AA | | C | Capacitor(50WV 2200PF) | [C264] |
| 182 | VCKYCY1HB222K | AA | | C | Capacitor(50WV 2200PF) | [C265] |
| 183 | VCKYCY1HB222K | AA | | C | Capacitor(50WV 2200PF) | [C266] |
| 184 | VCKYCY1HB222K | AA | | C | Capacitor(50WV 2200PF) | [C267] |
| 185 | VCKYCY1HB222K | AA | | C | Capacitor(50WV 2200PF) | [C268] |
| 186 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) | [C270] |
| 187 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μ F) | [C271] |
| 188 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C279] |
| 189 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) | [C280] |
| 190 | VCCCCY1HH150J | AB | | C | Capacitor(50WV 15PF) | [C281] |
| 191 | VCKYTV1AF106Z | AC | | C | Capacitor(10WV 10μ F) | [C283] |
| 192 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C284] |
| 193 | VCKYTV1AF106Z | AC | | C | Capacitor(10WV 10μ F) | [C285] |
| 194 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C286] |
| 195 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) | [C292] |
| 196 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) | [C293] |
| 197 | VRS-CY1JB202J | AA | | C | Resistor(1/16W 2KΩ ± 5%) | [C294] |
| 198 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C296] |
| 199 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C297] |
| 200 | VCKYCY1HB272K | AB | | C | Capacitor(50WV 2700PF) | [C298] |
| 201 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C299] |
| 202 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C300] |
| 203 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C301] |
| 204 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C302] |
| 205 | VCKYCY1HB222K | AA | | C | Capacitor(50WV 2200PF) | [C303] |
| 206 | VCKYCY1HB222K | AA | | C | Capacitor(50WV 2200PF) | [C304] |
| 207 | VCKYCY1HB222K | AA | | C | Capacitor(50WV 2200PF) | [C305] |
| 208 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C311] |
| 209 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) | [C320] |
| 210 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) | [C321] |
| 211 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C322] |
| 212 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C323] |
| 213 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C324] |
| 214 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C325] |
| 215 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C326] |
| 216 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C327] |
| 217 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C328] |
| 218 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C329] |
| 219 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C332] |
| 220 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C336] |
| 221 | VCKYCY1HB222K | AA | | C | Capacitor(50WV 2200PF) | [C338] |
| 222 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) | [C341] |
| 223 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C342] |
| 224 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C343] |
| 225 | VCKYTV1AF106Z | AC | | C | Capacitor(10WV 10μ F) | [C344] |

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| **[4] Control PWB unit** | | | | | | |
| 226 | VCCCCY1HH101J | AA | | C | Capacitor(50WV 100PF) | [C347] |
| 227 | VCKYCY1AB105K | AB | | C | Capacitor(10WV 1μF) | [C349] |
| 228 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C350] |
| 229 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) | [C351] |
| 230 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) | [C353] |
| 231 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C355] |
| 232 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C356] |
| 233 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C357] |
| 234 | VCKYCY1CB104K | AB | | C | Capacitor(16WV 0.1μF) | [C358] |
| 235 | VCKYCY1CB104K | AB | | C | Capacitor(16WV 0.1μF) | [C359] |
| 236 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) | [C360] |
| 237 | VCKYCY1CB104K | AB | | C | Capacitor(16WV 0.1μF) | [C361] |
| 238 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C362] |
| 239 | VCKYTV1AF106Z | AC | | C | Capacitor(10WV 10μF) | [C365] |
| 240 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) | [C366] |
| 241 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C368] |
| 242 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C369] |
| 243 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C370] |
| 244 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C371] |
| 245 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C372] |
| 246 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C373] |
| 247 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C374] |
| 248 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C375] |
| 249 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C376] |
| 250 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C377] |
| 251 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C378] |
| 252 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C379] |
| 253 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C380] |
| 254 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C381] |
| 255 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C382] |
| 256 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C383] |
| 257 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C384] |
| 258 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C385] |
| 259 | VCCCCY1HH560J | AA | | C | Capacitor(50WV 56PF) | [C386] |
| 260 | VCKYCY1HB103K | AA | | C | Capacitor(50WV 0.01μF) | [C387] |
| 261 | QCNCM2681XH0C | AD | N | C | Connector(3pin) | [CNBKL] |
| 262 | QCNCM2666XH0G | AE | | C | Connector(7pin) | [CNCIS] |
| 263 | QCNCM2681XH0D | AD | | C | Connector(4pin) | [CNCRMT] |
| 264 | QCNCM2666XH0D | AD | | C | Connector(4pin) | [CNFDMT] |
| 265 | QCNCW2556SC1B | AG | | C | Connector(12pin) | [CNHEAD1] |
| 266 | QCNCW2556SC1B | AG | | C | Connector(12pin) | [CNHEAD2] |
| 267 | QCNCM2681XH1F | AF | | C | Connector(16pin) | [CNLIU] |
| 268 | QCNCM2684XH0C | AE | N | C | Connector(3pin) | [CNMIC] |
| 269 | QCNCM2666XH1F | AF | | C | Connector(16pin) | [CNPN] |
| 270 | QCNCM2667XH0C | AD | | C | Connector(3pin) | [CNPRG] |
| 271 | QCNCM2666XH0H | AE | | C | Connector(8pin) | [CNPW] |
| 272 | QCNCM2666XH0B | AD | | C | Connector(2pin) | [CNSP] |
| 273 | VHDSS14////-1 | AF | | B | Diode(SS14) | [D1] |
| 274 | VHDSS14////-1 | AF | | B | Diode(SS14) | [D2] |
| 275 | VHDSS14////-1 | AF | | B | Diode(SS14) | [D3] |
| 276 | VHDSS14////-1 | AF | | B | Diode(SS14) | [D4] |
| 277 | VHDSS14////-1 | AF | | B | Diode(SS14) | [D5] |
| 278 | VHDSS16////-1 | AF | | B | Diode(SS16) | [D6] |
| 279 | VHDSS14////-1 | AF | | B | Diode(SS14) | [D7] |
| 280 | VHDSS14////-1 | AF | | B | Diode(SS14) | [D8] |
| 281 | VHDSS14////-1 | AF | | B | Diode(SS14) | [D9] |
| 282 | VHD1SR154/4-1 | AC | | B | Diode(1SR154) | [D10] |
| 283 | VHD1SS355//-1 | AB | | B | Diode(1SS355) | [D11] |
| 284 | VHD1SS355//-1 | AB | | B | Diode(1SS355) | [D100] |
| 285 | VHDRB715F//-1 | AF | | B | Diode(RB715F) | [D102] |
| 286 | VHD1SS355//-1 | AB | | B | Diode(1SS355) | [D103] |
| 287 | VHD1SS355//-1 | AB | | B | Diode(1SS355) | [D104] |
| ⚠ 288 | QFS-L2016XHZZ | AD | | A | IC protector(KAB5002 201) | [FU100] |
| ⚠ 289 | QFS-L1027YCZZ | AE | | A | IC protector(KAB3202 202) | [FU101] |
| 290 | RH-iX2168SCZZ | BB | | B | IC(MSM51V4800E) | [IC1] |
| 291 | RH-iX2441XHZZ | AL | N | B | IC(SN74LV4051APWR) | [IC2] |
| 292 | RH-iX2418XHZZ | BA | | B | IC(M12L16161A-7TG) | [IC3] |
| 293 | RH-iX2405XHZZ | BD | | B | IC(μPD65945) | [IC4] |
| 294 | VHiSCE214VS-1 | BT | N | B | IC(SCE214VS)(Within IC5 and IC11 pair) | [IC5] |
| 295 | VHiMC34119DR2 | AH | | B | IC(MC34119DR2) | [IC6] |
| 296 | VHiF004/TC70B | BA | N | B | IC,FLASH ROM(DE)(4MB)(Ver.:TC70B) | [IC7] |
| 296 | VHiF004/TC69A | | N | B | IC,FLASH ROM(H)(4MB)(Ver.:TC69A) | [IC7] |
| 296 | VHiF004/TC71A | | N | B | IC,FLASH ROM(IT)(4MB)(Ver.:TC71A) | [IC7] |
| 297 | RH-iX2379XHZZ | AZ | | B | IC(PM39LV040) | [IC8] |
| 298 | VHiPC901054-1 | AY | | B | IC(PLCC44) | [IC10] |
| 299 | VHiSCE214VS-1 | BT | | B | IC(20438-14)(Within IC5 and IC11 pair) | [IC11] |
| 300 | RH-iX2383XHZZ | AG | | B | IC(LM2902NSR) | [IC12] |
| 301 | VHiBU4066FV-1 | | N | B | IC(BU4066BCFV-E2) | [IC14] |
| 302 | RCiLF2175XHZZ | AL | | C | Coil(680μH) | [L1] |
| 303 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [L100] |
| 304 | VRS-CY1JB100J | AA | | C | Resistor(1/16W 10Ω ± 5%) | [L101] |
| 305 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [L102] |
| 306 | RCiLZ2183XHZZ | AF | | C | Coil(MMZ1608Y601BT) | [L103] |
| 307 | VRS-CY1JB150J | AA | | C | Resistor(1/16W 15Ω ± 5%) | [L104] |
| 308 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [L105] |

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| **[4] Control PWB unit** | | | | | |
| 309 | RCiLZ2179XHZZ | AE | | C | Coil(BLM18HG102SN1D) [L106] |
| ⚠ 310 | VHPGP1S094HCZ | AG | | B | Photo transistor(GP1S094HCZ) [PH1] |
| 311 | VS2SA1530AS-1 | AC | | B | Transistor(2SA1530AS) [Q105] |
| 312 | VSRT1N141CT-1 | | N | B | Transistor(RT1N141C) [Q107] |
| 313 | VS2SC2411KR-1 | AC | | B | Transistor(2SC2411KR) [Q108] |
| 314 | VRS-HT3DA110J | AE | | C | Resistor(2W 11Ω ± 5%) [R1] |
| 315 | VRS-CY1JB101J | AA | | C | Resistor(1/16W 100Ω ± 5%) [R2] |
| 316 | VRS-CY1JB201J | AA | | C | Resistor(1/16W 200Ω ± 5%) [R3] |
| 317 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R5] |
| 318 | VRS-CY1JB332J | AA | | C | Resistor(1/16W 3.3KΩ ± 5%) [R6] |
| 319 | VRS-HT3AAR91J | AB | | C | Resistor(1W 0.91Ω ± 5%) [R7] |
| 320 | VRS-HT3AAR91J | AB | | C | Resistor(1W 0.91Ω ± 5%) [R8] |
| 321 | VRS-CY1JB101J | AA | | C | Resistor(1/16W 100Ω ± 5%) [R9] |
| 322 | VRS-HT3AAR91J | AB | | C | Resistor(1W 0.91Ω ± 5%) [R10] |
| 323 | VRS-CY1JB393J | AA | | C | Resistor(1/16W 39KΩ ± 5%) [R12] |
| 324 | VRS-CY1JB393J | AA | | C | Resistor(1/16W 39KΩ ± 5%) [R13] |
| 325 | VRS-CY1JB102J | AA | | C | Resistor(1/16W 1KΩ ± 5%) [R14] |
| 326 | VRS-HT3AAR91J | AB | | C | Resistor(1W 0.91Ω ± 5%) [R17] |
| 327 | VRS-HT3DA221J | AB | | C | Resistor(2W 220Ω ± 5%) [R18] |
| 328 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R22] |
| 329 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R23] |
| 330 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R25] |
| 331 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R27] |
| 332 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R29] |
| 333 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R30] |
| 334 | VRS-CY1JB104J | AA | | C | Resistor(1/16W 100KΩ ± 5%) [R31] |
| 335 | VRS-CY1JB332J | AA | | C | Resistor(1/16W 3.3KΩ ± 5%) [R32] |
| 336 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R33] |
| 337 | VRS-CY1JB202J | AA | | C | Resistor(1/16W 2KΩ ± 5%) [R34] |
| 338 | VRS-CY1JB203J | AA | | C | Resistor(1/16W 20KΩ ± 5%) [R35] |
| 339 | VRS-CY1JB102J | AA | | C | Resistor(1/16W 1KΩ ± 5%) [R36] |
| 340 | VRS-CY1JB151J | AA | | C | Resistor(1/16W 150Ω ± 5%) [R37] |
| 341 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R38] |
| 342 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R39] |
| 343 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R40] |
| 344 | VRS-CY1JB332J | AA | | C | Resistor(1/16W 3.3KΩ ± 5%) [R41] |
| 345 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R42] |
| 346 | VRS-CY1JB332J | AA | | C | Resistor(1/16W 3.3KΩ ± 5%) [R43] |
| 347 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R100] |
| 348 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R101] |
| 349 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R104] |
| 350 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R105] |
| 351 | VRS-CY1JB562J | AA | | C | Resistor(1/16W 5.6KΩ ± 5%) [R106] |
| 352 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R108] |
| 353 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) [R109] |
| 354 | VRS-CY1JB105J | AA | | C | Resistor(1/16W 1MΩ ± 5%) [R110] |
| 355 | VRS-CY1JB151J | AA | | C | Resistor(1/16W 150Ω ± 5%) [R111] |
| 356 | VRS-CY1JB121J | AA | | C | Resistor(1/16W 120Ω ± 5%) [R112] |
| 357 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R113] |
| 358 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R114] |
| 359 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) [R115] |
| 360 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) [R116] |
| 361 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) [R117] |
| 362 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R118] |
| 363 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) [R119] |
| 364 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) [R120] |
| 365 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) [R121] |
| 366 | VRS-CY1JB471J | AA | | C | Resistor(1/16W 470Ω ± 5%) [R122] |
| 367 | VRS-CY1JB471J | AA | | C | Resistor(1/16W 470Ω ± 5%) [R123] |
| 368 | VRS-CY1JB680J | AA | | C | Resistor(1/16W 68Ω ± 5%) [R124] |
| 369 | VRS-CY1JB471J | AA | | C | Resistor(1/16W 470Ω ± 5%) [R125] |
| 370 | VRS-CY1JB680J | AA | | C | Resistor(1/16W 68Ω ± 5%) [R126] |
| 371 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) [R127] |
| 372 | VRS-CY1JB680J | AA | | C | Resistor(1/16W 68Ω ± 5%) [R128] |
| 373 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) [R129] |
| 374 | VRS-CY1JB106J | AA | | C | Resistor(1/16W 10MΩ ± 5%) [R130] |
| 375 | VRS-CY1JB224J | AA | | C | Resistor(1/16W 220KΩ ± 5%) [R131] |
| 376 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R132] |
| 377 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) [R133] |
| 378 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R134] |
| 379 | VRS-CY1JB104J | AA | | C | Resistor(1/16W 100KΩ ± 5%) [R136] |
| 380 | VRS-CY1JB682J | AA | | C | Resistor(1/16W 6.8KΩ ± 5%) [R139] |
| 381 | VRS-CY1JB682J | AA | | C | Resistor(1/16W 6.8KΩ ± 5%) [R140] |
| 382 | VRS-CY1JB203J | AA | | C | Resistor(1/16W 20KΩ ± 5%) [R141] |
| 383 | VRS-CY1JB622J | AA | | C | Resistor(1/16W 6.2KΩ ± 5%) [R142] |
| 384 | VRS-CY1JB433J | AA | | C | Resistor(1/16W 43KΩ ± 5%) [R143] |
| 385 | VRS-CY1JB302J | AA | | C | Resistor(1/16W 3KΩ ± 5%) [R144] |
| 386 | VRS-CY1JB683J | AA | | C | Resistor(1/16W 68KΩ ± 5%) [R145] |
| 387 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) [R146] |
| 388 | VRS-CY1JB303J | AA | | C | Resistor(1/16W 30KΩ ± 5%) [R147] |
| 389 | VRS-CY1JB113J | AA | | C | Resistor(1/16W 11KΩ ± 5%) [R148] |
| 390 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) [R150] |
| 391 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) [R152] |
| 392 | VRS-CY1JB391J | AA | | C | Resistor(1/16W 390Ω ± 5%) [R153] |
| 393 | VRS-CY1JB391J | AA | | C | Resistor(1/16W 390Ω ± 5%) [R154] |

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| **[4] Control PWB unit** | | | | | | |
| 394 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) | [R155] |
| 395 | VRS-CY1JB512J | AA | | C | Resistor(1/16W 5.1KΩ ± 5%) | [R156] |
| 396 | VRS-CY1JB473J | AA | | C | Resistor(1/16W 47KΩ ± 5%) | [R157] |
| 397 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) | [R158] |
| 398 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) | [R159] |
| 399 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) | [R160] |
| 400 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) | [R161] |
| 401 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) | [R162] |
| 402 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) | [R163] |
| 403 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) | [R164] |
| 404 | VRS-CY1JB471J | AA | | C | Resistor(1/16W 470Ω ± 5%) | [R165] |
| 405 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R166] |
| 406 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R167] |
| 407 | VRS-CY1JB102J | AA | | C | Resistor(1/16W 1KΩ ± 5%) | [R169] |
| 408 | VRS-CY1JB150J | AA | | C | Resistor(1/16W 15Ω ± 5%) | [R170] |
| 409 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) | [R171] |
| 410 | VRS-CY1JB101J | AA | | C | Resistor(1/16W 100Ω ± 5%) | [R172] |
| 411 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R173] |
| 412 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) | [R174] |
| 413 | VRS-CY1JB224J | AA | | C | Resistor(1/16W 220KΩ ± 5%) | [R175] |
| 414 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R176] |
| 415 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R177] |
| 416 | VRS-CY1JB102J | AA | | C | Resistor(1/16W 1KΩ ± 5%) | [R178] |
| 417 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R183] |
| 418 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R184] |
| 419 | VRS-CY1JB101J | AA | | C | Resistor(1/16W 100Ω ± 5%) | [R185] |
| 420 | VRS-CY1JB102J | AA | | C | Resistor(1/16W 1KΩ ± 5%) | [R186] |
| 421 | VRS-CY1JB222J | AA | | C | Resistor(1/16W 2.2KΩ ± 5%) | [R187] |
| 422 | VRS-CY1JB101J | AA | | C | Resistor(1/16W 100Ω ± 5%) | [R188] |
| 423 | VRS-CY1JB222J | AA | | C | Resistor(1/16W 2.2KΩ ± 5%) | [R189] |
| 424 | VRS-CY1JB222J | AA | | C | Resistor(1/16W 2.2KΩ ± 5%) | [R190] |
| 425 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R193] |
| 426 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R195] |
| 427 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R196] |
| 428 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R197] |
| 429 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R198] |
| 430 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) | [R199] |
| 431 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R200] |
| 432 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R201] |
| 433 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R202] |
| 434 | VRS-CY1JB101J | AA | | C | Resistor(1/16W 100Ω ± 5%) | [R203] |
| 435 | VRS-CY1JB101J | AA | | C | Resistor(1/16W 100Ω ± 5%) | [R204] |
| 436 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R205] |
| 437 | VRS-CY1JB101J | AA | | C | Resistor(1/16W 100Ω ± 5%) | [R206] |
| 438 | VRS-CY1JB101J | AA | | C | Resistor(1/16W 100Ω ± 5%) | [R207] |
| 439 | VRSCY1JB1000F | AA | | C | Resistor(1/16W 100Ω ± 1%) | [R211] |
| 440 | VRS-CY1JB202F | AC | | C | Resistor(1/16W 2.0KΩ ± 1%) | [R212] |
| 441 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R213] |
| 442 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R214] |
| 443 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R219] |
| 444 | VRS-CY1JB512J | AA | | C | Resistor(1/16W 5.1KΩ ± 5%) | [R220] |
| 445 | VRS-CY1JB513J | AA | | C | Resistor(1/16W 51KΩ ± 5%) | [R221] |
| 446 | VRS-CY1JB271J | AA | | C | Resistor(1/16W 270Ω ± 5%) | [R222] |
| 447 | VRS-CY1JB823J | AD | | C | Resistor(1/16W 82KΩ ± 5%) | [R223] |
| 448 | VRS-CY1JB104J | AA | | C | Resistor(1/16W 100KΩ ± 5%) | [R224] |
| 449 | VRSCY1JB7871F | AA | | C | Resistor(1/16W 7.87KΩ ± 1%) | [R234] |
| 450 | VRS-CY1JB473J | AA | | C | Resistor(1/16W 47KΩ ± 5%) | [R235] |
| 451 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R236] |
| 452 | RCiLZ2183XHZZ | AF | | C | Coil(MMZ1608Y601B) | [R238] |
| 453 | RCiLZ2183XHZZ | AF | | C | Coil(MMZ1608Y601B) | [R239] |
| 454 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R240] |
| 455 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) | [R241] |
| 456 | VRS-CY1JB100J | AA | | C | Resistor(1/16W 10Ω ± 5%) | [R243] |
| 457 | VRS-CY1JB100J | AA | | C | Resistor(1/16W 10Ω ± 5%) | [R244] |
| 458 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R245] |
| 459 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R246] |
| 460 | VRS-CY1JB330J | AA | | C | Resistor(1/16W 33Ω ± 5%) | [R247] |
| 461 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R248] |
| 462 | VRS-CY1JB393J | AA | | C | Resistor(1/16W 39KΩ ± 5%) | [R251] |
| 463 | VRS-CY1JB105J | AA | | C | Resistor(1/16W 1MΩ ± 5%) | [R253] |
| 464 | VRS-CY1JB393J | AA | | C | Resistor(1/16W 39KΩ ± 5%) | [R254] |
| 465 | VRS-CY1JB393J | AA | | C | Resistor(1/16W 39KΩ ± 5%) | [R255] |
| 466 | VRS-CY1JB393J | AA | | C | Resistor(1/16W 39KΩ ± 5%) | [R256] |
| 467 | VRS-CY1JB183J | AA | | C | Resistor(1/16W 18KΩ ± 5%) | [R258] |
| 468 | VRS-CY1JB332J | AA | | C | Resistor(1/16W 3.3KΩ ± 5%) | [R259] |
| 469 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) | [R260] |
| 470 | VRS-CY1JB105J | AA | | C | Resistor(1/16W 1MΩ ± 5%) | [R261] |
| 471 | VRS-CY1JB105J | AA | | C | Resistor(1/16W 1MΩ ± 5%) | [R262] |
| 472 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R263] |
| 473 | VRS-CY1JB682J | AA | | C | Resistor(1/16W 6.8KΩ ± 5%) | [R264] |
| 474 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) | [R265] |
| 475 | VRS-CY1JB473J | AA | | C | Resistor(1/16W 47KΩ ± 5%) | [R266] |
| 476 | RR-TZ3018SCZZ | AC | | C | Block resistor(470Ω x4) | [RA1] |
| 477 | RR-TZ3018SCZZ | AC | | C | Block resistor(470Ω x4) | [RA2] |
| 478 | RR-TZ3023SCZZ | AC | | B | Resistor array(100Ω x4) | [RA3] |

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| **[4] Control PWB unit** | | | | | | |
| 479 | RR-TZ3023SCZZ | AC | | B | Resistor array(100Ω x4) | [RA4] |
| 480 | RR-TZ3023SCZZ | AC | | B | Resistor array(100Ω x4) | [RA5] |
| 481 | RR-TZ3023SCZZ | AC | | B | Resistor array(100Ω x4) | [RA6] |
| 482 | RR-TZ3023SCZZ | AC | | B | Resistor array(100Ω x4) | [RA7] |
| 483 | RR-TZ3023SCZZ | AC | | B | Resistor array(100Ω x4) | [RA8] |
| 484 | RR-TZ3016SCZZ | AA | | C | Block resistor(33Ω x4) | [RA9] |
| 485 | RR-TZ3016SCZZ | AA | | C | Block resistor(33Ω x4) | [RA10] |
| 486 | RR-TZ3023SCZZ | AC | | B | Resistor array(100Ω x4) | [RA11] |
| 487 | RR-TZ3023SCZZ | AC | | B | Resistor array(100Ω x4) | [RA12] |
| 488 | RR-TZ3016SCZZ | AA | | C | Block resistor(33Ω x4) | [RA13] |
| 489 | RR-TZ3016SCZZ | AA | | C | Block resistor(33Ω x4) | [RA14] |
| 490 | RR-TZ3016SCZZ | AA | | C | Block resistor(33Ω x4) | [RA15] |
| 491 | RR-TZ3016SCZZ | AA | | C | Block resistor(33Ω x4) | [RA16] |
| 492 | RR-TZ3016SCZZ | AA | | C | Block resistor(33Ω x4) | [RA17] |
| 493 | RR-TZ3016SCZZ | AA | | C | Block resistor(33Ω x4) | [RA18] |
| 494 | RR-TZ3016SCZZ | AA | | C | Block resistor(33Ω x4) | [RA19] |
| 495 | VHiBA178M24-1 | AL | | B | IC(BA178M24FP-E2) | [REG1] |
| 496 | RH-iX2360XHZZ | AL | | B | IC(S-815A33AMC-I2S-TF) | [REG2] |
| 497 | RH-iX2360XHZZ | AL | | B | IC(S-815A33AMC-I2S-TF) | [REG3] |
| 498 | RCRSB2185XHZZ | AD | | B | Crystal(32.768kHz) | [X1] |
| 499 | RCRSP2190SCZZ | AE | | B | Crystal(32.256MHz) | [X2] |
| | (Unit) | | | | | |
| 901 | DCEKC588UXHZZ | CA | N | E | Control PWB unit(Within ROM)(DE) | |
| 901 | DCEKC680UXHZZ | CA | N | E | Control PWB unit(Within ROM)(H) | |
| 901 | DCEKC681UXHZZ | | N | E | Control PWB unit(Within ROM)(IT) | |
| **[5] LIU PWB unit** | | | | | | |
| 1 | VHVRA501PC6-1 | AG | | B | Varistor(RA501P-C6) | [AR1] |
| 2 | VHVRA501PC6-1 | AG | | B | Varistor(RA501P-C6) | [AR2] |
| 3 | QCNWN205CXHZZ | AF | | C | ARG earth cable | [ARG1] |
| 4 | VCEAGA1HW225M | AA | | C | Capacitor(50WV 2.2μ F) | [C1] |
| 5 | VCEAGA1HW106M | AA | | C | Capacitor(50WV 10μ F) | [C2] |
| 6 | RC-FZ3077SCZZ | AG | | C | Capacitor(250WV 0.47μ F) | [C4] |
| 7 | RC-FZ3079SCZZ | AG | | C | Capacitor(250WV 1μ F) | [C5] |
| 8 | VCEAGA1HW226M | AB | | C | Capacitor(50WV 22μ F) | [C8] |
| 9 | VCEAGA1EW107M | AB | | C | Capacitor(25WV 100μ F) | [C9] |
| 10 | VCEAGA1EW476M | AA | | C | Capacitor(25WV 47μ F) | [C10] |
| 11 | VCFYDA1HA474J | AD | | C | Capacitor(50WV 0.47μ F) | [C11] |
| 12 | VCEAGA1HW225M | AA | | C | Capacitor(50WV 2.2μ F) | [C12] |
| 13 | VCEAGA1HW107M | AA | | C | Capacitor(50WV 100μ F) | [C13] |
| 14 | VCEAEA1HW106M | AA | | C | Capacitor(50WV 10μ F) | [C14] |
| 15 | RC-EZ3064SCZZ | AC | | C | Capacitor(10WV 1000μ F) | [C15] |
| 16 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C102] |
| 17 | VCKYCY1HB103K | AA | | C | Capacitor(50WV 0.01μ F) | [C105] |
| 18 | VCKYCY1HB563K | AC | | C | Capacitor(50WV 0.056μ F) | [C106] |
| 19 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C107] |
| 20 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) | [C108] |
| 21 | VCKYCY1CB104K | AB | | C | Capacitor(16WV 0.1μ F) | [C109] |
| 22 | VCKYCY1CB224K | AE | | C | Capacitor(16WV 0.22μ F) | [C110] |
| 23 | VCKYCY1HB563K | AC | | C | Capacitor(50WV 0.056μ F) | [C111] |
| 24 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C113] |
| 25 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) | [C115] |
| 26 | VCKYCY1HB471K | AB | | C | Capacitor(50WV 470PF) | [C116] |
| 27 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) | [C117] |
| 28 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) | [C118] |
| 29 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C119] |
| 30 | VCCCCY1HH331J | AB | | C | Capacitor(50WV 330PF) | [C120] |
| 31 | VCCCCY1HH221J | AA | | C | Capacitor(50WV 220PF) | [C121] |
| 32 | VCKYCY1HB152K | AB | | C | Capacitor(50WV 1500PF) | [C122] |
| 33 | VCKYCY1CB104K | AB | | C | Capacitor(16WV 0.1μ F) | [C123] |
| 34 | VCKYCY1AF105Z | AC | | C | Capacitor(10WV 1μ F) | [C124] |
| 35 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C125] |
| 36 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C126] |
| 37 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C127] |
| 38 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C128] |
| 39 | VCKYCY1HB102K | AA | | C | Capacitor(50WV 1000PF) | [C129] |
| 40 | VCCCCY1HH120J | AA | | C | Capacitor(50WV 12PF) | [C130] |
| 41 | VCKYCY1AB105K | AB | | C | Capacitor(10WV 1μ F) | [C131] |
| 42 | VCKYCY1HB223K | AC | | C | Capacitor(50WV 0.022μ F) | [C132] |
| 43 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C133] |
| 44 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C134] |
| 45 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C136] |
| 46 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μ F) | [C139] |
| 47 | RRLYD3439XHZZ | AM | | B | Relay(A5X-24E-908) | [CML] |
| 48 | QCNCM7014SC0i | AB | | C | Connector(9pin) | [CNDECT] |
| 49 | QCNCM2681XH1F | AF | | C | Connector(16pin) | [CNLIU] |
| 50 | QJAKZ2060SC0F | AE | | C | Jack | [CNLNJ] |
| 51 | QJAKZ2060SC0D | AE | | C | Jack | [CNTLJ] |
| 52 | VHD1N4148//-1 | AA | | B | Diode(1N4148) | [D1] |
| 53 | VHD1N4148//-1 | AA | | B | Diode(1N4148) | [D2] |
| 54 | QCNWN308CXHZZ | AH | | C | FG earth cable | [FG] |
| 55 | RH-iX2262XHZZ | AP | | B | IC(SN74LV4053ANSR) | [IC101] |
| 56 | RH-iX2394XHZZ | AG | | B | IC(LM2904PS) | [IC102] |
| ⚠ 57 | RFiLN2027XHZZ | AC | | C | Coil(R-5C) | [L1] |
| ⚠ 58 | RFiLN2027XHZZ | AC | | C | Coil(R-5C) | [L3] |

| | NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|---|
| | **[5] LIU PWB unit** | | | | | | |
| | 59 | RCiLF2125SCZZ | AF | | C | Coil(4.7mH) | [L6] |
| ⚠ | 60 | RFiLN2027XHZZ | AC | | C | Coil(R-5C) | [L7] |
| ⚠ | 61 | RFiLN2027XHZZ | AC | | C | Coil(R-5C) | [L8] |
| | 62 | VP-XF221K0000 | | | C | Coil(LAL02TB221K) | [L10] |
| | 63 | VHPPS2561L-1/ | AG | | B | Photo transistor(PS2561L-1) | [PC2] |
| | 64 | VHPPS2561L-1/ | AG | | B | Photo transistor(PS2561L-1) | [PC3] |
| | 65 | VSKTD2092//-1 | AL | | B | Transistor(KTD2092) | [Q1] |
| | 66 | VSKTC3198GR-1 | AD | | B | Transistor(KTC3198GR) | [Q2] |
| | 67 | VSRT1N436CT-1 | AE | | B | Transistor(RT1N436C) | [Q101] |
| | 68 | VSRT1N436CT-1 | AE | | B | Transistor(RT1N436C) | [Q102] |
| | 69 | VSRT1N141CT-1 | | | B | Transistor(RT1N141C) | [Q107] |
| | 70 | VRS-HT3AA121J | AA | | C | Resistor(1W 120Ω ± 5%) | [R1] |
| | 71 | VRD-HT2EY103J | AA | | C | Resistor(1/4W 10KΩ ± 5%) | [R2] |
| | 72 | VRD-HT2HY473J | AA | | C | Resistor(1/2W 47KΩ ± 5%) | [R4] |
| | 73 | VRD-HT2EY101J | AA | | C | Resistor(1/4W 100Ω ± 5%) | [R7] |
| | 74 | VRS-TS2AD103J | AA | | C | Resistor(1/10W 10KΩ ± 5%) | [R101] |
| | 75 | VRS-TS2AD330J | AA | | C | Resistor(1/10W 33Ω ± 5%) | [R102] |
| | 76 | VRS-TS2AD101J | AA | | C | Resistor(1/10W 100Ω ± 5%) | [R103] |
| | 77 | VRS-TS2AD240J | AA | | C | Resistor(1/10W 24Ω ± 5%) | [R104] |
| | 78 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R105] |
| | 79 | VRS-CY1JB751J | AA | | C | Resistor(1/16W 750Ω ± 5%) | [R106] |
| | 80 | VRS-CY1JB202J | AA | | C | Resistor(1/16W 2KΩ ± 5%) | [R107] |
| | 81 | VRS-CY1JB391J | AA | | C | Resistor(1/16W 390Ω ± 5%) | [R108] |
| | 82 | VRS-CY1JB223J | AA | | C | Resistor(1/16W 22KΩ ± 5%) | [R109] |
| | 83 | VRS-TS2AD471J | AA | | C | Resistor(1/10W 470Ω ± 5%) | [R111] |
| | 84 | VRS-CY1JB362J | AA | | C | Resistor(1/16W 3.6KΩ ± 5%) | [R112] |
| | 85 | VRS-CY1JB303J | AA | | C | Resistor(1/16W 30KΩ ± 5%) | [R113] |
| | 86 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) | [R114] |
| | 87 | VRS-CY1JB202J | AA | | C | Resistor(1/16W 2.2KΩ ± 5%) | [R115] |
| | 88 | VRS-TS2AD332J | AA | | C | Resistor(1/10W 3.3KΩ ± 5%) | [R116] |
| | 89 | VRS-TS2AD433J | AA | | C | Resistor(1/10W 43KΩ ± 5%) | [R117] |
| | 90 | VRS-CY1JB102J | AA | | C | Resistor(1/16W 1KΩ ± 5%) | [R121] |
| | 91 | VRS-CY1JB223J | AA | | C | Resistor(1/16W 22KΩ ± 5%) | [R123] |
| | 92 | VRS-CY1JB303J | AA | | C | Resistor(1/16W 30KΩ ± 5%) | [R125] |
| | 93 | VRS-CY1JB102J | AA | | C | Resistor(1/16W 1KΩ ± 5%) | [R126] |
| | 94 | VRS-CY1JB203J | AA | | C | Resistor(1/16W 20KΩ ± 5%) | [R127] |
| | 95 | VRS-CY1JB101J | AA | | C | Resistor(1/16W 100Ω ± 5%) | [R128] |
| | 96 | VRS-TP2BD3R0J | AA | | C | Resistor(1/8W 3Ω ± 5%) | [R129] |
| | 97 | VRS-TS2AD301J | AA | | C | Resistor(1/10W 300Ω ± 5%) | [R130] |
| | 98 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R131] |
| | 99 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R133] |
| | 100 | VRS-CY1JB104J | AA | | C | Resistor(1/16W 100KΩ ± 5%) | [R134] |
| | 101 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R135] |
| | 102 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R136] |
| | 103 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R137] |
| | 104 | VRS-CY1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R138] |
| | 105 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) | [R139] |
| | 106 | VRS-CY1JB103J | AA | | C | Resistor(1/16W 10KΩ ± 5%) | [R140] |
| | 107 | VRS-CY1JB332J | AA | | C | Resistor(1/16W 3.3KΩ ± 5%) | [R141] |
| | 108 | RH-DX2007SCZZ | AC | | B | Diode bridge(S1ZB60) | [REC1] |
| | 109 | VHiNJM78L05A1 | AD | | B | IC(NJM78L05A) | [REG1] |
| ⚠ | 110 | RTRNi2165XHZZ | AG | | B | Transformer(I2165) | [T1] |
| | 111 | VHVDSS301L/-U | AF | | B | Varistor(DSS-301L) | [VA2] |
| | 112 | VRD-HT2EY103J | AA | | C | Resistor(1/4W 10KΩ ± 5%) | [ZD1] |
| | 113 | VHEMTZJ4R7B-1 | AC | | B | Zener diode(MTZJ4R7B) | [ZD2] |
| | 114 | VHEMTZJ4R7B-1 | AC | | B | Zener diode(MTZJ4R7B) | [ZD3] |
| | 115 | VHEBZX79B47/A | AH | | B | Zener diode(BZX79B47) | [ZD5] |
| | 116 | VHEHZ11C3//-1 | AB | | B | Zener diode(HZ11C3) | [ZD6] |
| | 117 | VHEMTZJ200B-1 | AC | | B | Zener diode(MTZJ20B) | [ZD7] |
| | 118 | VHEMTZJ100B-1 | AC | | B | Zener diode(MTZJ10B) | [ZD8] |
| | | (Unit) | | | | | |
| | 901 | DCEKL293DXH01 | BG | N | E | LIU PWB unit | |
| | **[6] Power supply PWB unit** | | | | | | |
| | 1 | 0KYL5051AQ001 | AE | | C | Ferrite beads(BL02RN1) | [BEA1] |
| | 2 | 0KYL5051AQ001 | AE | | C | Ferrite beads(BL02RN1) | [BEA101] |
| | 3 | 0KYC2131QS104 | AG | | C | Film capacitor(275WV 0.1μ F) | [C1] |
| | 4 | 0KYC3138MS390 | AU | | C | Electrolytic capacitor(400WV 39μ F) | [C5] |
| | 5 | 0KYC1384QS472 | AG | | C | Ceramic capacitor(4700PF) | [C6] |
| | 6 | 0KYC1384QS472 | AG | | C | Ceramic capacitor(4700PF) | [C7] |
| | 7 | 0KYC10B2SQ470 | AG | | C | Ceramic capacitor(2KWV 47PF) | [C8] |
| | 8 | 0KYC1102EC472 | AC | | C | Ceramic capacitor(50WV 4700PF) | [C9] |
| | 9 | 0KYC1102CC333 | AC | | C | Ceramic capacitor(25WV 0.033μ F) | [C10] |
| | 10 | 0KYC10Q1EQ101 | AC | | C | Ceramic capacitor(50WV 100PF) | [C11] |
| | 11 | 0KYC30A0EQ101 | AH | | C | Electrolytic capacitor(50WV 100μ F) | [C101] |
| | 12 | 0KYC30A0BQ471 | AL | | C | Electrolytic capacitor(16WV 470μ F) | [C102] |
| | 13 | 0KYC30A0EQ560 | AG | N | C | Electrolytic capacitor(50WV 56μ F) | [C104] |
| | 14 | 0KYC30A0BQ121 | AG | | C | Electrolytic capacitor(16WV 120μ F) | [C105] |
| | 15 | 0KYC10Q2BQ104 | AC | | C | Ceramic capacitor(16WV 0.1μ F) | [C110] |
| | 16 | 0KYK2051AQ002 | AG | | C | Connector(3pin) | [CNAC] |
| | 17 | 0KYK2148LS006 | AF | N | C | Connector(2pin) | [CNEXP] |
| | 18 | 0KYK2148LS002 | AG | | C | Connector(8pin) | [CNPW] |
| | 19 | 0KYD2051AQ002 | AD | | B | Diode(1SS133) | [D3] |
| | 20 | 0KYD2051AQ002 | AD | | B | Diode(1SS133) | [D4] |
| | 21 | 0KYD4066AQ060 | AF | | B | Zener diode(HZS9) | [D5] |

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION | |
|---|---|---|---|---|---|---|
| **[6] Power supply PWB unit** | | | | | | |
| 22 | 0KYD2051AQ002 | AD | | B | Diode(1SS133) | [D6] |
| 23 | 0KYD2051AQ002 | AD | | B | Diode(1SS133) | [D7] |
| 24 | 0KYD4066AQ105 | AF | | B | Zener diode(HZS30) | [D8] |
| 25 | 0KYD1057AQ006 | AF | | B | Diode(ERA15-06) | [D10] |
| 26 | 0KYD1057AQ006 | AF | | B | Diode(ERA15-06) | [D11] |
| 27 | 0KYD1057AQ006 | AF | | B | Diode(ERA15-06) | [D12] |
| 28 | 0KYD1057AQ006 | AF | | B | Diode(ERA15-06) | [D13] |
| 29 | 0KYD2049BQ202 | AQ | | B | Diode(ERC91-02) | [D101] |
| 30 | 0KYD20Q0AQ003 | AL | | B | Diode(EC31QS03L) | [D102] |
| 31 | 0KYD20Q1AQ004 | AM | | B | Diode(EC21QS04) | [D103] |
| 32 | 0KYD4061AQ380 | AK | | B | Zener diode(HZ-36P) | [D104] |
| 33 | 0KYK7135AS003 | AM | | A | Fuse(T2.5A/250V) | [F1] |
| 34 | 0KYK7135AS003 | AM | | A | Fuse(T2.5A/250V) | [F2] |
| 35 | 0KYH1053AQ003 | AP | | B | Integreted circuit(TA76431AS) | [IC101] |
| 36 | 0KYW0000AQ010 | AC | | C | Jumper wire(10mm) | [J101] |
| 37 | 0KYW0000AQ005 | AC | | C | Jumper wire(5mm) | [J102] |
| 38 | 0KYL1173JL553 | AS | | C | Inductor(SS11VL-03550) | [L1] |
| 39 | 0KYD7102AR8R0 | AM | | B | NTC thermistor(NTPA78R0) | [NTC1] |
| 40 | 0KYH7148AS003 | AM | | B | Optical isolater(PC123) | [PC1] |
| 41 | 0KYT2718KL001 | AV | | B | FET(2SK2718) | [Q1] |
| 42 | 0KYT4097CC002 | AG | | B | Transistor(2SC4097) | [Q2] |
| 43 | 0KYR3133AC225 | AC | | C | Resistor(1/4W 2.2MΩ ) | [R1] |
| 44 | 0KYR3126TC394 | AC | | C | Resistor(1/8W 390KΩ ) | [R2] |
| 45 | 0KYR3126TC394 | AC | | C | Resistor(1/8W 390KΩ ) | [R3] |
| 46 | 0KYR3126TC394 | AC | | C | Resistor(1/8W 390KΩ ) | [R4] |
| 47 | 0KYR3114VC183 | AC | | C | Resistor(1/10W 18KΩ ) | [R5] |
| 48 | 0KYR3121TC222 | AC | | C | Resistor(1/8W 2.2KΩ ) | [R6] |
| 49 | 0KYR3111VC182 | AC | | C | Resistor(1/10W 1.8KΩ ) | [R7] |
| 50 | 0KYR3111VC333 | AB | | C | Resistor(1/10W 33KΩ ) | [R8] |
| 51 | 0KYR3121TC101 | AB | | C | Resistor(1/8W 100Ω ) | [R9] |
| 52 | 0KYR3111VC682 | AB | | C | Resistor(1/10W 6.8KΩ ) | [R10] |
| 53 | 0KYR3114VC103 | AC | | C | Resistor(1/10W 10KΩ ) | [R11] |
| 54 | 0KYR3111VC223 | AB | | C | Resistor(1/10W 22KΩ ) | [R12] |
| 55 | 0KYR3111VC221 | AC | | C | Resistor(1/10W 220Ω ) | [R13] |
| 56 | 0KYR3121TC681 | AB | | C | Resistor(1/8W 680Ω ) | [R17] |
| 57 | 0KYR1053UQ470 | AC | | C | Resistor(1/4W 47Ω ) | [R19] |
| 58 | 0KYR3133AC225 | AC | | C | Resistor(1/4W 2.2MΩ ) | [R41] |
| 59 | 0KYR3131AC752 | AC | | C | Resistor(1/4W 7.5KΩ ) | [R102] |
| 60 | 0KYR1053UQ562 | AC | | C | Resistor(1/4W 5.6KΩ ) | [R103] |
| 61 | 0KYR3131AC752 | AC | | C | Resistor(1/4W 7.5KΩ ) | [R105] |
| 62 | 0KYR3131AC752 | AC | | C | Resistor(1/4W 7.5KΩ ) | [R106] |
| 63 | 0KYR1053UQ562 | AC | | C | Resistor(1/4W 5.6KΩ ) | [R107] |
| 64 | 0KYR3131AC752 | AC | | C | Resistor(1/4W 7.5KΩ ) | [R109] |
| 65 | 0KYR3121TC101 | AB | | C | Resistor(1/8W 100Ω ) | [R110] |
| 66 | 0KYR3111VC272 | AC | | C | Resistor(1/10W 2.7KΩ ) | [R111] |
| 67 | 0KYR3111VC472 | AC | | C | Resistor(1/10W 4.7KΩ ) | [R112] |
| 68 | 0KYR3114VC562 | AC | | C | Resistor(1/16W 5.6KΩ ) | [R113] |
| 69 | 0KYR3114VC512 | AC | | C | Resistor(1/10W 5.1KΩ ) | [R115] |
| 70 | 0KYR3131AC222 | AC | N | C | Resistor(1/4W 2.2KΩ ) | [R201] |
| 71 | 0KYR3131AC222 | AC | N | C | Resistor(1/4W 2.2KΩ ) | [R202] |
| 72 | 0KYL2100DS056 | AZ | N | B | Transformer(56D1) | [T1] |
| 73 | 0KYR8054EQ102 | AG | | C | Variable resistor(1/10W 1KΩ ) | [VA101] |
| 74 | 0KYD7062AQ471 | AH | | B | Transient voltage surge suppressor(ENC471) | [Z1] |
| | (Unit) | | | | | |
| ⚠ 901 | RDENT2219XHZZ | BH | N | E | Power supply PWB unit | |
| **[7] Operation panel PWB unit** | | | | | | |
| 1 | QSW-K0005AWZZ | AC | | C | Tact switch | [SW] |
| ⚠ 2 | QSW-M2246AXZZ | AH | | C | FRSNS sensor | [SW1] |
| ⚠ 3 | QSW-M2294XHZZ | AE | | C | ORGSNS sensor | [SW2] |
| | (Unit) | | | | | |
| 901 | DCEKP275DXH01 | BC | N | E | Operation panel PWB unit | |
| **[8] Ink PWB unit** | | | | | | |
| 1 | RC-EZ3074XHZZ | AG | | C | Capacitor(25WV 1000μF) | [C1] |
| 2 | VCCCCZ1EH181J | AA | | C | Capacitor(25WV 180PF) | [C100] |
| 3 | VCCCCZ1EH181J | AA | | C | Capacitor(25WV 180PF) | [C101] |
| 4 | VCKYCY1HF473Z | AA | | C | Capacitor(50WV 0.047μF) | [C102] |
| 5 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) | [C104] |
| 6 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) | [C106] |
| 7 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) | [C107] |
| 8 | VCKYCY1HF104Z | AA | | C | Capacitor(50WV 0.1μF) | [C111] |
| 9 | QCNWN320CXHZZ | AL | N | C | FFC,Ink cable 1 | [CNHEAD1] |
| 10 | QCNWN320CXHZZ | AL | N | C | FFC,Ink cable 2 | [CNHEAD2] |
| 11 | RH-iX2442XHZZ | AY | N | B | IC(IX2442) | [IC100] |
| 12 | VHPGP1S094HCZ | AG | | B | Photo transistor(GP1S094HCZ) | [PI1] |
| 13 | VRS-CZ1JB390J | AA | | C | Resistor(1/16W 39Ω ± 5%) | [R100] |
| 14 | VRS-CZ1JB390J | AA | | C | Resistor(1/16W 39Ω ± 5%) | [R101] |
| 15 | VRS-CZ1JB392J | AD | | C | Resistor(1/16W 3.9KΩ ± 5%) | [R102] |
| 16 | VRS-CZ1JB000J | AA | | C | Resistor(1/16W 0Ω ± 5%) | [R103] |
| 17 | VRS-CZ1JB392J | AD | | C | Resistor(1/16W 3.9KΩ ± 5%) | [R104] |
| 18 | VRS-CZ1JB392J | AD | | C | Resistor(1/16W 3.9KΩ ± 5%) | [R105] |
| 19 | VRS-CZ1JB121J | AA | | C | Resistor(1/16W 120Ω ± 5%) | [R106] |
| 20 | VRS-CZ1JB512J | AD | | C | Resistor(1/16W 5.1KΩ ± 5%) | [R107] |

| NO. | PARTS CODE | PRICE RANK | NEW MARK | PART RANK | DESCRIPTION |
|---|---|---|---|---|---|
| **[8] Ink PWB unit** | | | | | |
| 21 | VRS-CZ1JB512J | AD | | C | Resistor(1/16W 5.1KΩ ± 5%) [R108] |
| 22 | VRS-CZ1JB121J | AA | | C | Resistor(1/16W 120Ω ± 5%) [R109] |
| 23 | PSHEP3680XHZZ | AD | | C | C1 sheet [SHEET1] |
| 24 | PTPEH2098XHZZ | AD | | C | FPC tape [TAPE1] |
| 27 | PTPEH2096XHZZ | AD | | C | FPC tape 2 [TAPE4] |
| | (Unit) | | | | |
| 901 | DCEKi256DXH01 | BG | | E | Ink PWB unit with FPC |

# ■INDEX

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| 【 C 】 | | | | |
| CCNWN202CXH01 | 1-14 | AN | | C |
| CMŌTZ2192XH01 | 1-80 | AX | | B |
| CPAKC297GXH01 | 3-1 | | N | D |
| CPAKC297GXH02 | 3-1 | | N | D |
| CPAKC297GXH03 | 3-1 | | N | D |
| CPAKC298GXH01 | 3-1 | | N | D |
| CPAKC298GXH02 | 3-1 | | N | D |
| CPLTP3222XHR3 | 3-3 | BA | | D |
| CRŌLP2499XH02 | 1-32 | AL | | C |
| CRŌLP2517XH02 | 1-88 | AW | | C |
| CRŌLR2516XHT1 | 1-89 | AU | | C |
| CRŌLR2518XH01 | 1-31 | AX | | C |
| 【 D 】 | | | | |
| DCEKC588UXHZZ | 1-3 | CA | N | E |
| 〃 | 4-901 | CA | N | E |
| DCEKC680UXHZZ | 1-3 | CA | N | E |
| 〃 | 4-901 | CA | N | E |
| DCEKC681UXHZZ | 1-3 | | N | E |
| 〃 | 4-901 | | N | E |
| DCEKi256DXH01 | 1-2 | BG | | E |
| 〃 | 8-901 | BG | | E |
| DCEKL293DXH01 | 1-1 | BG | N | E |
| 〃 | 5-901 | BG | N | E |
| DCEKP254DXH16 | 2-901 | BT | N | E |
| DCEKP254DXH17 | 2-901 | BT | N | E |
| DCEKP254DXH18 | 2-901 | | N | E |
| DCEKP275DXH01 | 2-9 | BC | N | E |
| 〃 | 7-901 | BC | N | E |
| 【 G 】 | | | | |
| GCABA2428SCS2 | 3-28 | ** | N | D |
| GCABA2440XHSB | 1-4 | AY | | D |
| GCABB2429SCS2 | 3-25 | ** | N | D |
| GCABB2441XHSB | 1-15 | AX | | D |
| GCASP2187XHSP | 2-1 | BC | N | D |
| GCASP2187XHSQ | 2-1 | BC | N | D |
| GCASP2187XHSR | 2-1 | | N | D |
| GCASP2193XHSA | 1-137 | AL | N | C |
| GCŌVA2465XHZA | 1-54 | AL | | C |
| GCŌVA2466XHZZ | 1-55 | AG | | C |
| GCŌVA2501XHSE | 1-23 | AV | N | C |
| GCŌVA2502XHSA | 1-5 | AF | | C |
| GCŌVA2518XHSA | 1-134 | AQ | N | C |
| GCŌVA2519XHSA | 1-138 | AK | N | C |
| GFTAB2139SCS2 | 3-29 | ** | N | C |
| GLEGG2078XHZZ | 2-27 | AD | | C |
| GLEGG2088XHZZ | 1-16 | AE | | C |
| 【 H 】 | | | | |
| HPNLH2444XHST | 2-26 | AL | N | D |
| HPNLH2444XHSU | 2-26 | AL | N | D |
| HPNLH2444XHSV | 2-26 | | N | D |
| HPNLH2444XHSW | 2-26 | AN | N | D |
| HPNLH2444XHSX | 2-26 | | N | D |
| 【 J 】 | | | | |
| JBTN-2463XHSM | 2-2 | AN | N | C |
| JBTN-2464XHSA | 2-3 | AG | | C |
| JBTN-2464XHSB | 2-3 | AG | | C |
| JBTN-2465XHSA | 2-4 | AF | | C |
| JBTN-2465XHSB | 2-4 | AF | | C |
| JBTN-2466XHSA | 2-5 | AF | | C |
| JBTN-2466XHSB | 2-5 | AF | | C |
| JBTN-2467XHSA | 2-6 | AF | | C |
| JBTN-2468XHSA | 2-7 | AL | | C |
| JBTN-2469XHSA | 2-8 | AP | | C |
| 〃 | 2-31 | AP | | C |
| 【 L 】 | | | | |
| LBNDJ2006XHZZ | 1-17 | AA | | C |
| LBSHP2157XHZZ | 1-90 | AE | | C |
| LCHSM2078XHZZ | 1-91 | AP | | C |
| LFRM-2257XHZZ | 1-92 | AY | | C |
| LFRM-2258XHZZ | 1-75 | AL | | C |
| LHLDW2290XHZZ | 1-53 | AE | | C |
| LHLDZ2215XHZZ | 1-70 | AE | | C |
| LHLDZ2221XHZZ | 1-57 | AD | | C |
| LHLDZ2222XHZZ | 1-58 | AD | | C |
| LHLDZ2245XHZB | 1-59 | AL | | C |
| LHLDZ2246XHZZ | 1-60 | AE | | C |
| LHLDZ2247XHZZ | 1-61 | AG | | C |
| LHLDZ2275XHZZ | 1-94 | AF | | C |
| LHLDZ2276XHZZ | 1-43 | AF | | C |
| LHLDZ2277XHZZ | 1-44 | AF | | C |
| LHLDZ2278XHZZ | 1-71 | AG | | C |
| LHLDZ2288XHZZ | 1-95 | AF | | C |
| LHLDZ2291XHZZ | 1-93 | AE | | C |
| LHLDZ2298XHZZ | 2-28 | AM | N | C |
| LHLDZ2301XHZZ | 1-136 | AK | N | C |
| LPLTG3311XHZZ | 2-16 | AF | | C |
| LPLTM3316XHZZ | 1-96 | AF | | C |
| LPLTM3317XHZZ | 1-18 | AL | | C |
| LPLTM3328XHZZ | 1-81 | AX | | C |
| LPLTM3329XHZZ | 1-97 | AX | | C |
| LPLTP3312XHZZ | 2-17 | AE | | C |
| LPLTP3313XHZZ | 2-18 | AE | | C |
| LPLTP3314XHZZ | 2-19 | AE | | C |
| LPLTP3318XHZA | 3-2 | | | D |
| LPLTP3318XHZZ | 3-2 | AP | | D |
| LPLTP3321XHZZ | 1-24 | AE | | C |
| LPLTP3334XHZZ | 1-49 | AL | | C |
| LX-BZ2205XHZZ | 1-B7 | AC | | C |
| LX-BZ2282XHZZ | 1-B2 | AB | | C |
| LX-BZ2308XHZZ | 1-B1 | AE | | C |
| LX-BZ2331XHZZ | 1-B10 | AD | | C |
| LX-WZ2273XHZZ | 1-W2 | AE | | C |
| LX-WZ2309XHZZ | 1-W3 | AE | | C |
| 【 M 】 | | | | |
| MARMP2036XHZZ | 1-98 | AF | | C |
| MARMP2037XHZZ | 1-99 | AE | | C |
| MLEVP2377XHZZ | 1-62 | AE | | C |
| MLEVP2396XHZZ | 1-100 | AF | | C |
| MLEVP2397XHZZ | 1-101 | AF | | C |
| MSPRC3360XHZZ | 1-102 | AE | | C |
| MSPRC3362XHZZ | 1-72 | AD | | C |
| MSPRC3387XHZZ | 1-111 | AD | | C |
| MSPRC3455XHZZ | 2-20 | AE | | C |
| MSPRC3456XHZZ | 2-21 | AE | | C |
| MSPRC3457XHZZ | 1-115 | AE | | C |
| MSPRC3458XHZZ | 1-104 | AE | | C |
| MSPRC3459XHZZ | 1-105 | AE | | C |
| MSPRC3460XHZZ | 1-106 | AE | | C |
| MSPRC3462XHZZ | 1-108 | AE | | C |
| MSPRC3463XHZZ | 1-109 | AE | | C |
| MSPRC3464XHZZ | 1-110 | AE | | C |
| MSPRC3465XHZZ | 1-82 | AE | | C |
| MSPRC3470XHZZ | 1-19 | AF | | C |
| MSPRC3488XHZZ | 1-33 | AE | | C |
| MSPRC3489XHZZ | 1-34 | AE | | C |
| MSPRC3490XHZZ | 1-103 | AE | | C |
| MSPRD3382XHZZ | 1-63 | AE | | C |
| MSPRD3383XHZZ | 1-64 | AE | | C |
| MSPRD3413XHZZ | 1-65 | AE | | C |
| MSPRD3495XHZZ | 2-22 | AE | | C |
| MSPRK3502XHZZ | 1-113 | AF | | C |
| MSPRK3503XHZZ | 1-112 | AF | | C |
| MSPRK3558XHZZ | 1-107 | AE | | C |
| MSPRP3279XHZZ | 1-66 | AE | | C |
| MSPRP3384XHZZ | 1-67 | AG | | C |
| MSPRP3388XHZZ | 1-68 | AE | | C |
| 【 N 】 | | | | |
| NBLTT2065XHZZ | 1-114 | AR | | C |
| NGERH2392XHZZ | 1-83 | AC | | C |
| NGERH2563XHZZ | 1-84 | AE | | C |
| NGERH2564XHZZ | 1-76 | AE | | C |
| NGERH2565XHZZ | 1-77 | AE | | C |
| NGERH2611XHZZ | 1-85 | AE | | C |
| NGERH2633XHZZ | 1-86 | AF | | C |
| NGERH2634XHZZ | 1-116 | AF | | C |
| NGERH2636XHZZ | 1-36 | AF | | C |
| NGERH2637XHZZ | 1-37 | AF | | C |
| NGERH2638XHZZ | 1-117 | AF | | C |
| NGERH2639XHZZ | 1-39 | AF | | C |
| NGERH2643XHZZ | 1-118 | AF | | C |
| NGERP2318XHZZ | 1-10 | AD | | C |
| NPLYD2095XHZZ | 1-119 | AE | | C |
| NRŌLM2480XHZZ | 1-120 | AE | | C |
| NRŌLP2332XHZZ | 2-23 | AD | | C |
| NRŌLP2477XHZZ | 1-121 | AE | | C |
| NRŌLP2478XHZZ | 1-78 | AE | | C |
| NRŌLP2492XHZZ | 1-25 | AT | | C |
| NRŌLR2483XHZZ | 1-40 | AL | | C |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| NSFTM2384XHZZ | 1-122 | AR | | C |
| NSFTP2385XHZZ | 1-41 | AF | | C |
| 【 P 】 | | | | |
| PBRS-2066XHZZ | 2-24 | AV | | C |
| PCAPH2090XHZZ | 1-73 | AE | | C |
| PFLT-2030XHZZ | 1-123 | AE | | C |
| PGiDM2669XHZZ | 2-25 | AS | | C |
| PGiDM2670XHSA | 1-11 | AF | | C |
| PGiDM2671XHSA | 1-12 | AG | | C |
| PGiDM2672XHSA | 1-13 | AQ | | C |
| PGiDM2673XHZZ | 3-17 | AE | | C |
| PGUMM2189XHZZ | 1-74 | AE | | C |
| PGUMM2212XHZZ | 1-129 | AG | | C |
| PGUMR2186XHZA | 1-79 | AG | | C |
| PGUMS2188XHZZ | 1-69 | AC | | C |
| PGUMS2196XHZZ | 1-26 | AG | | C |
| PSHEP3680XHZZ | 8-23 | AD | | C |
| PSHEZ3410XHZZ | 1-127 | AB | | C |
| PSHEZ3817XHZZ | 1-27 | AF | | C |
| PSHEZ3828XHZZ | 1-28 | AF | | C |
| PSHEZ3829XHZZ | 1-87 | AF | | C |
| PSHEZ3830XHZZ | 2-14 | AE | | C |
| PSHEZ3836XHZZ | 1-142 | AM | | C |
| PSHEZ3840XHZZ | 1-51 | AF | | C |
| PSHEZ3842XHZZ | 1-30 | AF | | C |
| PSHEZ3857XHZZ | 2-29 | | N | C |
| PSHEZ3873XHZZ | 1-8 | | N | C |
| PSHEZ3874XHZZ | 1-126 | | N | C |
| PSPÖ-2022XHZA | 1-48 | | N | C |
| PSPÖ-2023XHZZ | 1-9 | AE | | C |
| PTPEH2096XHZZ | 8-27 | AD | | C |
| PTPEH2098XHZZ | 8-24 | AD | | C |
| PTPEH2114XHZZ | 1-50 | AC | | C |
| 【 Q 】 | | | | |
| QACCB2080XHZZ | 1-20 | BA | N | B |
| QACCE2082XHZZ | 1-20 | AX | N | B |
| QCNCM2666XH0B | 4-272 | AD | | C |
| QCNCM2666XH0D | 4-264 | AD | | C |
| QCNCM2666XH0G | 4-262 | AE | | C |
| QCNCM2666XH0H | 4-271 | AE | | C |
| QCNCM2666XH1F | 4-269 | AF | | C |
| QCNCM2667XH0C | 4-270 | AD | | C |
| QCNCM2681XH0C | 4-261 | AD | N | C |
| QCNCM2681XH0D | 4-263 | AD | | C |
| QCNCM2681XH1F | 4-267 | AF | | C |
| 〃 | 5-49 | AF | | C |
| QCNCM2684XH0C | 4-268 | AE | N | C |
| QCNCM7014SC0i | 5-48 | AB | | C |
| QCNCW2556SC1B | 4-265 | AG | | C |
| 〃 | 4-266 | AG | | C |
| QCNTM2050SCS1 | 3-26 | ** | | C |
| QCNW-281AXHZZ | 3-6 | AL | | C |
| QCNW-4649XHZZ | 3-23 | AE | | C |
| QCNWG370BXHZZ | 3-20 | AL | | C |
| QCNWN200CXHZZ | 1-46 | AL | | C |
| QCNWN205CXHZZ | 5-3 | AF | | C |
| QCNWN280CXHZZ | 1-45 | AN | | C |
| QCNWN290CXHZZ | 2-30 | AG | N | C |
| QCNWN308CXHZZ | 5-54 | AH | | C |
| QCNWN309CXHZZ | 1-140 | AL | N | C |
| QCNWN310CXHZZ | 1-132 | | N | C |
| QCNWN320CXHZZ | 8-9 | AL | N | C |
| 〃 | 8-10 | AL | N | C |
| QCNWN345CXHZZ | 1-47 | | N | C |
| QCNWN350CXHZZ | 1-130 | | N | C |
| QCNWN498BXHZZ | 1-29 | AR | | C |
| 〃 | 2-15 | AR | | C |
| QFS-L1027YCZZ | 4-289 | AE | | A |
| QFS-L2016XHZZ | 4-288 | AD | | A |
| QJAKZ2060SC0D | 5-51 | AE | | C |
| QJAKZ2060SC0F | 5-50 | AE | | C |
| QPLGJ2019XHZZ | 3-19 | AN | | C |
| QSW-K0005AWZZ | 2-10 | AC | | C |
| 〃 | 7-1 | AC | | C |
| QSW-M2246AXZZ | 2-11 | AH | | C |
| 〃 | 7-2 | AH | | C |
| QSW-M2294XHZZ | 2-12 | AE | | C |
| 〃 | 7-3 | AE | | C |
| QTANB2057XHZZ | 1-133 | AQ | | C |
| 【 R 】 | | | | |
| RC-EZ3064SCZZ | 5-15 | AC | | C |
| RC-EZ3074XHZZ | 8-1 | AG | | C |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| RC-FZ3077SCZZ | 5-6 | AG | | C |
| RC-FZ3079SCZZ | 5-7 | AG | | C |
| RCiLF2125SCZZ | 5-59 | AF | | C |
| RCiLF2175XHZZ | 4-302 | AL | | C |
| RCiLZ2179XHZZ | 4-309 | AE | | C |
| RCiLZ2183XHZZ | 4-306 | AF | | C |
| 〃 | 4-452 | AF | | C |
| 〃 | 4-453 | AF | | C |
| RCÖRF0049CFZZ | 1-125 | AR | | B |
| RCÖRF2146XHZZ | 1-38 | AG | | B |
| RCÖRF2147XHZZ | 1-21 | AG | | B |
| RCRSB2185XHZZ | 4-498 | AD | | B |
| RCRSP2190SCZZ | 4-499 | AE | | B |
| RDENT2219XHZZ | 1-22 | BH | N | E |
| 〃 | 6-901 | BH | N | E |
| RFiLN2027XHZZ | 5-57 | AC | | C |
| 〃 | 5-58 | AC | | C |
| 〃 | 5-60 | AC | | C |
| 〃 | 5-61 | AC | | C |
| RH-DX2007SCZZ | 5-108 | AC | | B |
| RH-iX2168SCZZ | 4-290 | BB | | B |
| RH-iX2262XHZZ | 5-55 | AP | | B |
| RH-iX2360XHZZ | 4-496 | AL | | B |
| 〃 | 4-497 | AL | | B |
| RH-iX2379XHZZ | 4-297 | AZ | | B |
| RH-iX2383XHZZ | 4-300 | AG | | B |
| RH-iX2394XHZZ | 5-56 | AG | | B |
| RH-iX2405XHZZ | 4-293 | BD | | B |
| RH-iX2418XHZZ | 4-292 | BA | | B |
| RH-iX2441XHZZ | 4-291 | AL | N | B |
| RH-iX2442XHZZ | 8-11 | AY | N | B |
| RMiCC2025XHZZ | 1-131 | AL | N | B |
| RMÖTS2193XHZZ | 1-124 | AX | | B |
| RRLYD3439XHZZ | 5-47 | AM | | B |
| RR-TZ3016SCZZ | 4-484 | AA | | C |
| 〃 | 4-485 | AA | | C |
| 〃 | 4-488 | AA | | C |
| 〃 | 4-489 | AA | | C |
| 〃 | 4-490 | AA | | C |
| 〃 | 4-491 | AA | | C |
| 〃 | 4-492 | AA | | C |
| 〃 | 4-493 | AA | | C |
| 〃 | 4-494 | AA | | C |
| RR-TZ3018SCZZ | 4-476 | AC | | C |
| 〃 | 4-477 | AC | | C |
| RR-TZ3023SCZZ | 4-478 | AC | | B |
| 〃 | 4-479 | AC | | B |
| 〃 | 4-480 | AC | | B |
| 〃 | 4-481 | AC | | B |
| 〃 | 4-482 | AC | | B |
| 〃 | 4-483 | AC | | B |
| 〃 | 4-486 | AC | | B |
| 〃 | 4-487 | AC | | B |
| RTRNi2165XHZZ | 5-110 | AG | | B |
| RUiTZ2009XH01 | 3-30 | | N | E |
| RUiTZ2009XH02 | 3-30 | BK | N | E |
| RUNT-220DXH04 | 3-5 | ** | N | E |
| RUNTZ2134SCS2 | 1-141 | ** | N | E |
| RUNTZ2138XHZZ | 2-13 | BG | | B |
| RUNTZ2144SCS1 | 3-27 | ** | | E |
| RUNTZ2145XHZZ | 1-42 | BN | | B |
| 【 S 】 | | | | |
| SPAKA295GXHZZ | 3-9 | | N | D |
| SPAKA296GXHZZ | 3-7 | | N | D |
| SPAKA314GXHZZ | 3-8 | | N | D |
| SPAKA353GXHZZ | 3-32 | | N | D |
| SPAKA354GXHZZ | 3-31 | | N | D |
| SPAKA364GXHZZ | 3-33 | | N | D |
| SPAKA365GXHZZ | 3-34 | | N | D |
| SPAKA451FXHZZ | 3-10 | AE | | D |
| SPAKP449FXHZZ | 3-11 | AG | | D |
| 【 T 】 | | | | |
| TCADZ3757XHZZ | 3-14 | | N | D |
| TCADZ3758XHZZ | 3-14 | | N | D |
| TCADZ3759XHZZ | 3-14 | | N | D |
| TCADZ3778XHZZ | 3-14 | | N | D |
| TGANE2220XHZZ | 3-12 | AK | | D |
| TiNSE4473XHTZ | 3-15 | BC | N | D |
| TiNSG4472XHTZ | 3-15 | AS | N | D |
| TiNSi4474XHTZ | 3-15 | | N | D |
| TLABH221JXHZZ | 3-22 | | | D |
| TLABH388HXHGZ | 1-128 | AG | | D |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| TLABH393HXHiZ | 1-128 | AG | | D |
| TLABH441HXHZZ | 1-52 | AE | | D |
| TLABH442HXHZZ | 3-21 | AK | | D |
| TLABZ491GXHZZ | 3-24 | AE | | D |
| TLABZ492GXHZZ | 3-24 | AE | | D |
| TLABZ499GXHZZ | 3-24 | | | D |
| 【 U 】 | | | | |
| UBATL2049SCZZ | 4-1 | AF | | B |
| UiNK-2034XHZZ | 3-16 | AE | | S |
| 【 V 】 | | | | |
| VCCCCY1HH101J | 4-41 | AA | | C |
| 〃 | 4-43 | AA | | C |
| 〃 | 4-50 | AA | | C |
| 〃 | 4-68 | AA | | C |
| 〃 | 4-102 | AA | | C |
| 〃 | 4-107 | AA | | C |
| 〃 | 4-148 | AA | | C |
| 〃 | 4-149 | AA | | C |
| 〃 | 4-211 | AA | | C |
| 〃 | 4-212 | AA | | C |
| 〃 | 4-213 | AA | | C |
| 〃 | 4-214 | AA | | C |
| 〃 | 4-215 | AA | | C |
| 〃 | 4-216 | AA | | C |
| 〃 | 4-217 | AA | | C |
| 〃 | 4-218 | AA | | C |
| 〃 | 4-226 | AA | | C |
| VCCCCY1HH120J | 4-47 | AA | | C |
| 〃 | 4-51 | AA | | C |
| 〃 | 4-223 | AA | | C |
| 〃 | 4-224 | AA | | C |
| 〃 | 4-228 | AA | | C |
| 〃 | 4-231 | AA | | C |
| 〃 | 4-232 | AA | | C |
| 〃 | 4-233 | AA | | C |
| 〃 | 4-238 | AA | | C |
| 〃 | 5-35 | AA | | C |
| 〃 | 5-36 | AA | | C |
| 〃 | 5-37 | AA | | C |
| 〃 | 5-38 | AA | | C |
| 〃 | 5-40 | AA | | C |
| VCCCCY1HH150J | 4-190 | AB | | C |
| VCCCCY1HH180J | 4-79 | AA | | C |
| VCCCCY1HH220J | 4-77 | AA | | C |
| 〃 | 4-101 | AA | | C |
| VCCCCY1HH221J | 4-31 | AA | | C |
| 〃 | 4-36 | AA | | C |
| 〃 | 4-39 | AA | | C |
| 〃 | 4-195 | AA | | C |
| 〃 | 4-196 | AA | | C |
| 〃 | 4-240 | AA | | C |
| 〃 | 5-20 | AA | | C |
| 〃 | 5-25 | AA | | C |
| 〃 | 5-27 | AA | | C |
| 〃 | 5-28 | AA | | C |
| 〃 | 5-31 | AA | | C |
| VCCCCY1HH330J | 4-10 | AA | | C |
| VCCCCY1HH331J | 5-30 | AB | | C |
| VCCCCY1HH470J | 4-9 | AA | | C |
| VCCCCY1HH560J | 4-241 | AA | | C |
| 〃 | 4-242 | AA | | C |
| 〃 | 4-243 | AA | | C |
| 〃 | 4-244 | AA | | C |
| 〃 | 4-245 | AA | | C |
| 〃 | 4-246 | AA | | C |
| 〃 | 4-247 | AA | | C |
| 〃 | 4-248 | AA | | C |
| 〃 | 4-249 | AA | | C |
| 〃 | 4-250 | AA | | C |
| 〃 | 4-251 | AA | | C |
| 〃 | 4-252 | AA | | C |
| 〃 | 4-253 | AA | | C |
| 〃 | 4-254 | AA | | C |
| 〃 | 4-255 | AA | | C |
| 〃 | 4-256 | AA | | C |
| 〃 | 4-257 | AA | | C |
| 〃 | 4-258 | AA | | C |
| 〃 | 4-259 | AA | | C |
| VCCCCY1HH8R0D | 4-74 | AA | | C |
| VCCCCZ1EH181J | 8-2 | AA | | C |
| 〃 | 8-3 | AA | | C |
| VCCCTV1HH221J | 1-135 | AA | | C |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| VCEAEA1HW106M | 5-14 | AA | | C |
| VCEAGA1EW107M | 4-24 | AB | | C |
| 〃 | 5-9 | AB | | C |
| VCEAGA1EW227M | 4-33 | AB | | C |
| VCEAGA1EW476M | 4-8 | AA | | C |
| 〃 | 4-25 | AA | | C |
| 〃 | 4-26 | AA | | C |
| 〃 | 4-29 | AA | | C |
| 〃 | 4-30 | AA | | C |
| 〃 | 5-10 | AA | | C |
| VCEAGA1HW106M | 5-5 | AA | | C |
| VCEAGA1HW107M | 4-20 | AA | | C |
| 〃 | 4-34 | AA | | C |
| 〃 | 5-13 | AA | | C |
| VCEAGA1HW225M | 5-4 | AA | | C |
| 〃 | 5-12 | AA | | C |
| VCEAGA1HW226M | 4-2 | AB | | C |
| 〃 | 4-13 | AB | | C |
| 〃 | 4-35 | AB | | C |
| 〃 | 5-8 | AB | | C |
| VCEAGA1HW476M | 4-21 | AB | | C |
| 〃 | 4-22 | AB | | C |
| VCFYDA1HA474J | 5-11 | AD | | C |
| VCKYCY1AB105K | 4-46 | AB | | C |
| 〃 | 4-56 | AB | | C |
| 〃 | 4-142 | AB | | C |
| 〃 | 4-143 | AB | | C |
| 〃 | 4-227 | AB | | C |
| 〃 | 5-41 | AB | | C |
| VCKYCY1AF105Z | 4-4 | AC | | C |
| 〃 | 4-5 | AC | | C |
| 〃 | 4-6 | AC | | C |
| 〃 | 4-11 | AC | | C |
| 〃 | 4-12 | AC | | C |
| 〃 | 4-27 | AC | | C |
| 〃 | 4-76 | AC | | C |
| 〃 | 4-78 | AC | | C |
| 〃 | 4-81 | AC | | C |
| 〃 | 4-82 | AC | | C |
| 〃 | 4-83 | AC | | C |
| 〃 | 4-84 | AC | | C |
| 〃 | 4-85 | AC | | C |
| 〃 | 4-87 | AC | | C |
| 〃 | 4-115 | AC | | C |
| 〃 | 4-132 | AC | | C |
| 〃 | 4-135 | AC | | C |
| 〃 | 4-137 | AC | | C |
| 〃 | 4-153 | AC | | C |
| 〃 | 4-154 | AC | | C |
| 〃 | 4-187 | AC | | C |
| 〃 | 5-34 | AC | | C |
| VCKYCY1CB104K | 4-44 | AB | | C |
| 〃 | 4-45 | AB | | C |
| 〃 | 4-49 | AB | | C |
| 〃 | 4-55 | AB | | C |
| 〃 | 4-139 | AB | | C |
| 〃 | 4-234 | AB | | C |
| 〃 | 4-235 | AB | | C |
| 〃 | 4-237 | AB | | C |
| 〃 | 5-21 | AB | | C |
| 〃 | 5-33 | AB | | C |
| VCKYCY1CB224K | 5-22 | AE | | C |
| VCKYCY1HB102K | 4-14 | AA | | C |
| 〃 | 4-15 | AA | | C |
| 〃 | 4-71 | AA | | C |
| 〃 | 4-93 | AA | | C |
| 〃 | 4-111 | AA | | C |
| 〃 | 4-133 | AA | | C |
| 〃 | 4-134 | AA | | C |
| 〃 | 4-136 | AA | | C |
| 〃 | 4-138 | AA | | C |
| 〃 | 4-140 | AA | | C |
| 〃 | 4-156 | AA | | C |
| 〃 | 4-171 | AA | | C |
| 〃 | 4-186 | AA | | C |
| 〃 | 4-189 | AA | | C |
| 〃 | 4-209 | AA | | C |
| 〃 | 4-210 | AA | | C |
| 〃 | 4-222 | AA | | C |
| 〃 | 4-230 | AA | | C |
| 〃 | 4-236 | AA | | C |
| 〃 | 4-390 | AA | | C |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| 〃 | 5-39 | AA | | C |
| VCKYCY1HB103K | 4-23 | AA | | C |
| 〃 | 4-54 | AA | | C |
| 〃 | 4-88 | AA | | C |
| 〃 | 4-145 | AA | | C |
| 〃 | 4-260 | AA | | C |
| 〃 | 5-17 | AA | | C |
| VCKYCY1HB152K | 5-32 | AB | | C |
| VCKYCY1HB222K | 4-48 | AA | | C |
| 〃 | 4-181 | AA | | C |
| 〃 | 4-182 | AA | | C |
| 〃 | 4-183 | AA | | C |
| 〃 | 4-184 | AA | | C |
| 〃 | 4-185 | AA | | C |
| 〃 | 4-205 | AA | | C |
| 〃 | 4-206 | AA | | C |
| 〃 | 4-207 | AA | | C |
| 〃 | 4-221 | AA | | C |
| VCKYCY1HB223K | 5-42 | AC | | C |
| VCKYCY1HB272K | 4-200 | AB | | C |
| VCKYCY1HB471K | 4-69 | AB | | C |
| 〃 | 4-125 | AB | | C |
| 〃 | 4-126 | AB | | C |
| 〃 | 4-127 | AB | | C |
| 〃 | 4-157 | AB | | C |
| 〃 | 4-158 | AB | | C |
| 〃 | 4-159 | AB | | C |
| 〃 | 4-160 | AB | | C |
| 〃 | 4-161 | AB | | C |
| 〃 | 4-162 | AB | | C |
| 〃 | 4-163 | AB | | C |
| 〃 | 4-164 | AB | | C |
| 〃 | 4-165 | AB | | C |
| 〃 | 4-166 | AB | | C |
| 〃 | 4-167 | AB | | C |
| 〃 | 4-168 | AB | | C |
| 〃 | 5-19 | AB | | C |
| 〃 | 5-26 | AB | | C |
| VCKYCY1HB472K | 4-53 | AA | | C |
| VCKYCY1HB563K | 5-18 | AC | | C |
| 〃 | 5-23 | AC | | C |
| VCKYCY1HF104Z | 4-3 | AA | | C |
| 〃 | 4-7 | AA | | C |
| 〃 | 4-28 | AA | | C |
| 〃 | 4-37 | AA | | C |
| 〃 | 4-38 | AA | | C |
| 〃 | 4-40 | AA | | C |
| 〃 | 4-42 | AA | | C |
| 〃 | 4-52 | AA | | C |
| 〃 | 4-57 | AA | | C |
| 〃 | 4-58 | AA | | C |
| 〃 | 4-59 | AA | | C |
| 〃 | 4-60 | AA | | C |
| 〃 | 4-61 | AA | | C |
| 〃 | 4-62 | AA | | C |
| 〃 | 4-63 | AA | | C |
| 〃 | 4-64 | AA | | C |
| 〃 | 4-65 | AA | | C |
| 〃 | 4-66 | AA | | C |
| 〃 | 4-67 | AA | | C |
| 〃 | 4-70 | AA | | C |
| 〃 | 4-72 | AA | | C |
| 〃 | 4-73 | AA | | C |
| 〃 | 4-75 | AA | | C |
| 〃 | 4-80 | AA | | C |
| 〃 | 4-86 | AA | | C |
| 〃 | 4-89 | AA | | C |
| 〃 | 4-90 | AA | | C |
| 〃 | 4-91 | AA | | C |
| 〃 | 4-92 | AA | | C |
| 〃 | 4-94 | AA | | C |
| 〃 | 4-95 | AA | | C |
| 〃 | 4-96 | AA | | C |
| 〃 | 4-97 | AA | | C |
| 〃 | 4-98 | AA | | C |
| 〃 | 4-99 | AA | | C |
| 〃 | 4-100 | AA | | C |
| 〃 | 4-103 | AA | | C |
| 〃 | 4-104 | AA | | C |
| 〃 | 4-105 | AA | | C |
| 〃 | 4-106 | AA | | C |
| 〃 | 4-108 | AA | | C |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| 〃 | 4-109 | AA | | C |
| 〃 | 4-110 | AA | | C |
| 〃 | 4-112 | AA | | C |
| 〃 | 4-113 | AA | | C |
| 〃 | 4-114 | AA | | C |
| 〃 | 4-116 | AA | | C |
| 〃 | 4-117 | AA | | C |
| 〃 | 4-118 | AA | | C |
| 〃 | 4-119 | AA | | C |
| 〃 | 4-120 | AA | | C |
| 〃 | 4-121 | AA | | C |
| 〃 | 4-122 | AA | | C |
| 〃 | 4-123 | AA | | C |
| 〃 | 4-124 | AA | | C |
| 〃 | 4-128 | AA | | C |
| 〃 | 4-129 | AA | | C |
| 〃 | 4-130 | AA | | C |
| 〃 | 4-131 | AA | | C |
| 〃 | 4-141 | AA | | C |
| 〃 | 4-144 | AA | | C |
| 〃 | 4-146 | AA | | C |
| 〃 | 4-147 | AA | | C |
| 〃 | 4-150 | AA | | C |
| 〃 | 4-151 | AA | | C |
| 〃 | 4-152 | AA | | C |
| 〃 | 4-155 | AA | | C |
| 〃 | 4-169 | AA | | C |
| 〃 | 4-170 | AA | | C |
| 〃 | 4-172 | AA | | C |
| 〃 | 4-174 | AA | | C |
| 〃 | 4-175 | AA | | C |
| 〃 | 4-176 | AA | | C |
| 〃 | 4-177 | AA | | C |
| 〃 | 4-178 | AA | | C |
| 〃 | 4-179 | AA | | C |
| 〃 | 4-180 | AA | | C |
| 〃 | 4-188 | AA | | C |
| 〃 | 4-192 | AA | | C |
| 〃 | 4-194 | AA | | C |
| 〃 | 4-198 | AA | | C |
| 〃 | 4-199 | AA | | C |
| 〃 | 4-201 | AA | | C |
| 〃 | 4-202 | AA | | C |
| 〃 | 4-203 | AA | | C |
| 〃 | 4-204 | AA | | C |
| 〃 | 4-208 | AA | | C |
| 〃 | 4-219 | AA | | C |
| 〃 | 4-220 | AA | | C |
| 〃 | 4-229 | AA | | C |
| 〃 | 5-16 | AA | | C |
| 〃 | 5-24 | AA | | C |
| 〃 | 5-29 | AA | | C |
| 〃 | 5-43 | AA | | C |
| 〃 | 5-44 | AA | | C |
| 〃 | 5-45 | AA | | C |
| 〃 | 5-46 | AA | | C |
| 〃 | 8-5 | AA | | C |
| 〃 | 8-6 | AA | | C |
| 〃 | 8-7 | AA | | C |
| 〃 | 8-8 | AA | | C |
| VCKYCY1HF473Z | 8-4 | AA | | C |
| VCKYTV1AF106Z | 4-16 | AC | | C |
| 〃 | 4-17 | AC | | C |
| 〃 | 4-18 | AC | | C |
| 〃 | 4-19 | AC | | C |
| 〃 | 4-173 | AC | | C |
| 〃 | 4-191 | AC | | C |
| 〃 | 4-193 | AC | | C |
| 〃 | 4-225 | AC | | C |
| 〃 | 4-239 | AC | | C |
| VHD1N4148//-1 | 5-52 | AA | | B |
| 〃 | 5-53 | AA | | B |
| VHD1SR154/4-1 | 4-282 | AC | | B |
| VHD1SS355//-1 | 4-283 | AB | | B |
| 〃 | 4-284 | AB | | B |
| 〃 | 4-286 | AB | | B |
| 〃 | 4-287 | AB | | B |
| VHDRB715F//-1 | 4-285 | AF | | B |
| VHDSS14////-1 | 4-273 | AF | | B |
| 〃 | 4-274 | AF | | B |
| 〃 | 4-275 | AF | | B |
| 〃 | 4-276 | AF | | B |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| 〃 | 4-277 | AF | | B |
| 〃 | 4-279 | AF | | B |
| 〃 | 4-280 | AF | | B |
| 〃 | 4-281 | AF | | B |
| VHDSS16////-1 | 4-278 | AF | | B |
| VHEBZX79B47/A | 5-115 | AH | | B |
| VHEHZ11C3//-1 | 5-116 | AB | | B |
| VHEMTZJ100B-1 | 5-118 | AC | | B |
| VHEMTZJ200B-1 | 5-117 | AC | | B |
| VHEMTZJ4R7B-1 | 5-113 | AC | | B |
| 〃 | 5-114 | AC | | B |
| VHiBA178M24-1 | 4-495 | AL | | B |
| VHiBU4066FV-1 | 4-301 | | N | B |
| VHiF004/TC69A | 4-296 | | N | B |
| VHiF004/TC70B | 4-296 | BA | N | B |
| VHiF004/TC71A | 4-296 | | N | B |
| VHiMC34119DR2 | 4-295 | AH | | B |
| VHiNJM78L05A1 | 5-109 | AD | | B |
| VHiPC901054-1 | 4-298 | AY | | B |
| VHiSCE214VS-1 | 4-294 | BT | N | B |
| 〃 | 4-299 | BT | | B |
| VHPGP1S094HCZ | 4-310 | AG | | B |
| 〃 | 8-12 | AG | | B |
| VHPPS2561L-1/ | 5-63 | AG | | B |
| 〃 | 5-64 | AG | | B |
| VHVDSS301L/-U | 5-111 | AF | | B |
| VHVRA501PC6-1 | 5-1 | AG | | B |
| 〃 | 5-2 | AG | | B |
| VP-XF221K0000 | 5-62 | | | C |
| VRD-HT2EY101J | 5-73 | AA | | C |
| VRD-HT2EY103J | 5-71 | AA | | C |
| 〃 | 5-112 | AA | | C |
| VRD-HT2HY473J | 5-72 | AA | | C |
| VRS-CY1JB000J | 4-32 | AA | | C |
| 〃 | 4-303 | AA | | C |
| 〃 | 4-305 | AA | | C |
| 〃 | 4-308 | AA | | C |
| 〃 | 4-317 | AA | | C |
| 〃 | 4-328 | AA | | C |
| 〃 | 4-329 | AA | | C |
| 〃 | 4-330 | AA | | C |
| 〃 | 4-331 | AA | | C |
| 〃 | 4-336 | AA | | C |
| 〃 | 4-347 | AA | | C |
| 〃 | 4-348 | AA | | C |
| 〃 | 4-349 | AA | | C |
| 〃 | 4-350 | AA | | C |
| 〃 | 4-352 | AA | | C |
| 〃 | 4-378 | AA | | C |
| 〃 | 4-387 | AA | | C |
| 〃 | 4-405 | AA | | C |
| 〃 | 4-414 | AA | | C |
| 〃 | 4-415 | AA | | C |
| 〃 | 4-425 | AA | | C |
| 〃 | 4-441 | AA | | C |
| 〃 | 4-442 | AA | | C |
| 〃 | 4-443 | AA | | C |
| 〃 | 4-451 | AA | | C |
| 〃 | 4-454 | AA | | C |
| 〃 | 4-461 | AA | | C |
| 〃 | 4-472 | AA | | C |
| 〃 | 5-78 | AA | | C |
| 〃 | 5-98 | AA | | C |
| 〃 | 5-99 | AA | | C |
| 〃 | 5-101 | AA | | C |
| 〃 | 5-102 | AA | | C |
| 〃 | 5-103 | AA | | C |
| 〃 | 5-104 | AA | | C |
| VRSCY1JB1000F | 4-439 | AA | | C |
| VRS-CY1JB100J | 4-304 | AA | | C |
| 〃 | 4-456 | AA | | C |
| 〃 | 4-457 | AA | | C |
| VRS-CY1JB101J | 4-315 | AA | | C |
| 〃 | 4-321 | AA | | C |
| 〃 | 4-410 | AA | | C |
| 〃 | 4-419 | AA | | C |
| 〃 | 4-422 | AA | | C |
| 〃 | 4-434 | AA | | C |
| 〃 | 4-435 | AA | | C |
| 〃 | 4-437 | AA | | C |
| 〃 | 4-438 | AA | | C |
| 〃 | 5-95 | AA | | C |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| VRS-CY1JB102J | 4-325 | AA | | C |
| 〃 | 4-339 | AA | | C |
| 〃 | 4-407 | AA | | C |
| 〃 | 4-416 | AA | | C |
| 〃 | 4-420 | AA | | C |
| 〃 | 5-90 | AA | | C |
| 〃 | 5-93 | AA | | C |
| VRS-CY1JB103J | 4-332 | AA | | C |
| 〃 | 4-333 | AA | | C |
| 〃 | 4-341 | AA | | C |
| 〃 | 4-342 | AA | | C |
| 〃 | 4-343 | AA | | C |
| 〃 | 4-345 | AA | | C |
| 〃 | 4-357 | AA | | C |
| 〃 | 4-358 | AA | | C |
| 〃 | 4-362 | AA | | C |
| 〃 | 4-376 | AA | | C |
| 〃 | 4-377 | AA | | C |
| 〃 | 4-394 | AA | | C |
| 〃 | 4-397 | AA | | C |
| 〃 | 4-398 | AA | | C |
| 〃 | 4-430 | AA | | C |
| 〃 | 4-455 | AA | | C |
| 〃 | 4-469 | AA | | C |
| 〃 | 4-474 | AA | | C |
| 〃 | 5-86 | AA | | C |
| 〃 | 5-105 | AA | | C |
| 〃 | 5-106 | AA | | C |
| VRS-CY1JB104J | 4-334 | AA | | C |
| 〃 | 4-379 | AA | | C |
| 〃 | 4-448 | AA | | C |
| 〃 | 5-100 | AA | | C |
| VRS-CY1JB105J | 4-354 | AA | | C |
| 〃 | 4-463 | AA | | C |
| 〃 | 4-470 | AA | | C |
| 〃 | 4-471 | AA | | C |
| VRS-CY1JB106J | 4-374 | AA | | C |
| VRS-CY1JB113J | 4-389 | AA | | C |
| VRS-CY1JB121J | 4-356 | AA | | C |
| VRS-CY1JB150J | 4-307 | AA | | C |
| 〃 | 4-408 | AA | | C |
| VRS-CY1JB151J | 4-340 | AA | | C |
| 〃 | 4-355 | AA | | C |
| VRS-CY1JB183J | 4-467 | AA | | C |
| VRS-CY1JB201J | 4-316 | AA | | C |
| VRS-CY1JB202F | 4-440 | AC | | C |
| VRS-CY1JB202J | 4-197 | AA | | C |
| 〃 | 4-337 | AA | | C |
| 〃 | 5-80 | AA | | C |
| 〃 | 5-87 | AA | | C |
| VRS-CY1JB203J | 4-338 | AA | | C |
| 〃 | 4-382 | AA | | C |
| 〃 | 5-94 | AA | | C |
| VRS-CY1JB222J | 4-421 | AA | | C |
| 〃 | 4-423 | AA | | C |
| 〃 | 4-424 | AA | | C |
| VRS-CY1JB223J | 5-82 | AA | | C |
| 〃 | 5-91 | AA | | C |
| VRS-CY1JB224J | 4-375 | AA | | C |
| 〃 | 4-413 | AA | | C |
| VRS-CY1JB271J | 4-359 | AA | | C |
| 〃 | 4-360 | AA | | C |
| 〃 | 4-361 | AA | | C |
| 〃 | 4-399 | AA | | C |
| 〃 | 4-400 | AA | | C |
| 〃 | 4-401 | AA | | C |
| 〃 | 4-402 | AA | | C |
| 〃 | 4-403 | AA | | C |
| 〃 | 4-409 | AA | | C |
| 〃 | 4-412 | AA | | C |
| 〃 | 4-446 | AA | | C |
| VRS-CY1JB302J | 4-385 | AA | | C |
| VRS-CY1JB303J | 4-388 | AA | | C |
| 〃 | 5-85 | AA | | C |
| 〃 | 5-92 | AA | | C |
| VRS-CY1JB330J | 4-353 | AA | | C |
| 〃 | 4-363 | AA | | C |
| 〃 | 4-364 | AA | | C |
| 〃 | 4-365 | AA | | C |
| 〃 | 4-371 | AA | | C |
| 〃 | 4-373 | AA | | C |
| 〃 | 4-391 | AA | | C |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| 〃 | 4-406 | AA | | C |
| 〃 | 4-411 | AA | | C |
| 〃 | 4-417 | AA | | C |
| 〃 | 4-418 | AA | | C |
| 〃 | 4-426 | AA | | C |
| 〃 | 4-427 | AA | | C |
| 〃 | 4-428 | AA | | C |
| 〃 | 4-429 | AA | | C |
| 〃 | 4-431 | AA | | C |
| 〃 | 4-432 | AA | | C |
| 〃 | 4-433 | AA | | C |
| 〃 | 4-436 | AA | | C |
| 〃 | 4-458 | AA | | C |
| 〃 | 4-459 | AA | | C |
| 〃 | 4-460 | AA | | C |
| VRS-CY1JB332J | 4-318 | AA | | C |
| 〃 | 4-335 | AA | | C |
| 〃 | 4-344 | AA | | C |
| 〃 | 4-346 | AA | | C |
| 〃 | 4-468 | AA | | C |
| 〃 | 5-107 | AA | | C |
| VRS-CY1JB362J | 5-84 | AA | | C |
| VRS-CY1JB391J | 4-392 | AA | | C |
| 〃 | 4-393 | AA | | C |
| 〃 | 5-81 | AA | | C |
| VRS-CY1JB393J | 4-323 | AA | | C |
| 〃 | 4-324 | AA | | C |
| 〃 | 4-462 | AA | | C |
| 〃 | 4-464 | AA | | C |
| 〃 | 4-465 | AA | | C |
| 〃 | 4-466 | AA | | C |
| VRS-CY1JB433J | 4-384 | AA | | C |
| VRS-CY1JB471J | 4-366 | AA | | C |
| 〃 | 4-367 | AA | | C |
| 〃 | 4-369 | AA | | C |
| 〃 | 4-404 | AA | | C |
| VRS-CY1JB473J | 4-396 | AA | | C |
| 〃 | 4-450 | AA | | C |
| 〃 | 4-475 | AA | | C |
| VRS-CY1JB512J | 4-395 | AA | | C |
| 〃 | 4-444 | AA | | C |
| VRS-CY1JB513J | 4-445 | AA | | C |
| VRS-CY1JB562J | 4-351 | AA | | C |
| VRS-CY1JB622J | 4-383 | AA | | C |
| VRS-CY1JB680J | 4-368 | AA | | C |
| 〃 | 4-370 | AA | | C |
| 〃 | 4-372 | AA | | C |
| VRS-CY1JB682J | 4-380 | AA | | C |
| 〃 | 4-381 | AA | | C |
| 〃 | 4-473 | AA | | C |
| VRS-CY1JB683J | 4-386 | AA | | C |
| VRS-CY1JB751J | 5-79 | AA | | C |
| VRSCY1JB7871F | 4-449 | AA | | C |
| VRS-CY1JB823J | 4-447 | AD | | C |
| VRS-CZ1JB000J | 8-16 | AA | | C |
| VRS-CZ1JB121J | 8-19 | AA | | C |
| 〃 | 8-22 | AA | | C |
| VRS-CZ1JB390J | 8-13 | AA | | C |
| 〃 | 8-14 | AA | | C |
| VRS-CZ1JB392J | 8-15 | AD | | C |
| 〃 | 8-17 | AD | | C |
| 〃 | 8-18 | AD | | C |
| VRS-CZ1JB512J | 8-20 | AD | | C |
| 〃 | 8-21 | AD | | C |
| VRS-HT3AA121J | 5-70 | AA | | C |
| VRS-HT3AAR91J | 4-319 | AB | | C |
| 〃 | 4-320 | AB | | C |
| 〃 | 4-322 | AB | | C |
| 〃 | 4-326 | AB | | C |
| VRS-HT3DA110J | 4-314 | AE | | C |
| VRS-HT3DA221J | 4-327 | AB | | C |
| VRS-TP2BD3R0J | 5-96 | AA | | C |
| VRS-TS2AD101J | 5-76 | AA | | C |
| VRS-TS2AD103J | 5-74 | AA | | C |
| VRS-TS2AD240J | 5-77 | AA | | C |
| VRS-TS2AD301J | 5-97 | AA | | C |
| VRS-TS2AD330J | 5-75 | AA | | C |
| VRS-TS2AD332J | 5-88 | AA | | C |
| VRS-TS2AD433J | 5-89 | AA | | C |
| VRS-TS2AD471J | 5-83 | AA | | C |
| VS2SA1530AS-1 | 4-311 | AC | | B |
| VS2SC2411KR-1 | 4-313 | AC | | B |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| VSKTC3198GR-1 | 5-66 | AD | | B |
| VSKTD2092//-1 | 5-65 | AL | | B |
| VSRT1N141CT-1 | 4-312 | | N | B |
| 〃 | 5-69 | | | B |
| VSRT1N436CT-1 | 5-67 | AE | | B |
| 〃 | 5-68 | AE | | B |
| 【 X 】 | | | | |
| XEBS720P06000 | 2-B1 | AC | | C |
| XEBS730P10000 | 1-B3 | AC | | C |
| 〃 | 2-B2 | AC | | C |
| XEBS730P12000 | 1-B5 | AC | | C |
| XEPS726P04000 | 1-B8 | AD | | C |
| XHBS730P06000 | 1-B4 | AC | | C |
| XHBS730P10000 | 1-B6 | AD | | C |
| XUPS730P10XS0 | 1-B9 | AD | N | C |
| XWHSN40-08100 | 1-W1 | AA | | C |
| 【 0 】 | | | | |
| 0KYC10B2SQ470 | 6-7 | AG | | C |
| 0KYC10Q1EQ101 | 6-10 | AC | | C |
| 0KYC10Q2BQ104 | 6-15 | AC | | C |
| 0KYC1102CC333 | 6-9 | AC | | C |
| 0KYC1102EC472 | 6-8 | AC | | C |
| 0KYC1384QS472 | 6-5 | AG | | C |
| 〃 | 6-6 | AG | | C |
| 0KYC2131QS104 | 6-3 | AG | | C |
| 0KYC30A0BQ121 | 6-14 | AG | | C |
| 0KYC30A0BQ471 | 6-12 | AL | | C |
| 0KYC30A0EQ101 | 6-11 | AH | | C |
| 0KYC30A0EQ560 | 6-13 | AG | N | C |
| 0KYC3138MS390 | 6-4 | AU | | C |
| 0KYD1057AQ006 | 6-25 | AF | | B |
| 〃 | 6-26 | AF | | B |
| 〃 | 6-27 | AF | | B |
| 〃 | 6-28 | AF | | B |
| 0KYD2049BQ202 | 6-29 | AQ | | B |
| 0KYD2051AQ002 | 6-19 | AD | | B |
| 〃 | 6-20 | AD | | B |
| 〃 | 6-22 | AD | | B |
| 〃 | 6-23 | AD | | B |
| 0KYD20Q0AQ003 | 6-30 | AL | | B |
| 0KYD20Q1AQ004 | 6-31 | AM | | B |
| 0KYD4061AQ380 | 6-32 | AK | | B |
| 0KYD4066AQ060 | 6-21 | AF | | B |
| 0KYD4066AQ105 | 6-24 | AF | | B |
| 0KYD7062AQ471 | 6-74 | AH | | B |
| 0KYD7102AR8R0 | 6-39 | AM | | B |
| 0KYH1053AQ003 | 6-35 | AP | | B |
| 0KYH7148AS003 | 6-40 | AM | | B |
| 0KYK2051AQ002 | 6-16 | AG | | C |
| 0KYK2148LS002 | 6-18 | AG | | C |
| 0KYK2148LS006 | 6-17 | AF | N | C |
| 0KYK7135AS003 | 6-33 | AM | | A |
| 〃 | 6-34 | AM | | A |
| 0KYL1173JL553 | 6-38 | AS | | C |
| 0KYL2100DS056 | 6-72 | AZ | N | B |
| 0KYL5051AQ001 | 6-1 | AE | | C |
| 〃 | 6-2 | AE | | C |
| 0KYR1053UQ470 | 6-57 | AC | | C |
| 0KYR1053UQ562 | 6-60 | AC | | C |
| 〃 | 6-63 | AC | | C |
| 0KYR3111VC182 | 6-49 | AC | | C |
| 0KYR3111VC221 | 6-55 | AC | | C |
| 0KYR3111VC223 | 6-54 | AB | | C |
| 0KYR3111VC272 | 6-66 | AC | | C |
| 0KYR3111VC333 | 6-50 | AB | | C |
| 0KYR3111VC472 | 6-67 | AC | | C |
| 0KYR3111VC682 | 6-52 | AB | | C |
| 0KYR3114VC103 | 6-53 | AC | | C |
| 0KYR3114VC183 | 6-47 | AC | | C |
| 0KYR3114VC512 | 6-69 | AC | | C |
| 0KYR3114VC562 | 6-68 | AC | | C |
| 0KYR3121TC101 | 6-51 | AB | | C |
| 〃 | 6-65 | AB | | C |
| 0KYR3121TC222 | 6-48 | AC | | C |
| 0KYR3121TC681 | 6-56 | AB | | C |
| 0KYR3126TC394 | 6-44 | AC | | C |
| 〃 | 6-45 | AC | | C |
| 〃 | 6-46 | AC | | C |
| 0KYR3131AC222 | 6-70 | AC | N | C |
| 〃 | 6-71 | AC | N | C |
| 0KYR3131AC752 | 6-59 | AC | | C |
| 〃 | 6-61 | AC | | C |

| PARTS CODE | No. | PRICE RANK | NEW MARK | PART RANK |
|---|---|---|---|---|
| 〃 | 6-62 | AC | | C |
| 〃 | 6-64 | AC | | C |
| 0KYR3133AC225 | 6-43 | AC | | C |
| 〃 | 6-58 | AC | | C |
| 0KYR8054EQ102 | 6-73 | AG | | C |
| 0KYT2718KL001 | 6-41 | AV | | B |
| 0KYT4097CC002 | 6-42 | AG | | B |
| 0KYW0000AQ005 | 6-37 | AC | | C |
| 0KYW0000AQ010 | 6-36 | AC | | C |

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